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ORIGIN, MISSIONS, AND STRUCTURE OF CIA

Lyman B. Kirkpatrick

This is a brief summary of the history of the modern origin of the central intelligence concept and thus of the Central Intelligence Agency.

In 1940, the fortunes of Britain and France were at their lowest ebb. Some high-level officials of the US Government were predicting that Great Britain could not hold out against the Germans. To check on this, President Roosevelt sent Colonel William J. Donovan, prominent New York attorney and winner of the Congressional Medal of Honor as Commanding Officer of the 69th Regiment in World War I, abroad to discover and report his estimate of the situation. Donovan first visited the Mediterranean area, and on his second trip talked to leaders of both Britain and France. His report indicated that Britain would hold out, but he urged that the US immediately organize itself for global warfare. Donovan's particular interest was in the intelligence field, and he went to talk to Secretary of the Navy, Knox, Secretary of War Stimson, and Attorney General Jackson about his concept of an agency which would combine intelligence with the forces of propaganda and subversion.

On 10 June 1941, Donovan proposed "a service of strategic information." This service would have an advisory panel composed of the chiefs of intelligence of the Army, the Navy, the Department of State, and the FBI. It would draw its personnel from the Army and the Navy and would also have a civilian staff. It would not displace or encroach upon the intelligence prerogatives of the established departments, although it would collect information independently. This was the start of the Office of the Coordinator of Information which combined information, intelligence, and clandestine activities. In 1942, however, the Coordinator of Information was split and the Office of War Information — the predecessor of the present US Information Agency — was created and given the responsibility for all overt attributable propaganda information, and to the Office of Strategic Services went the responsibility for

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clandestine activities and for research and analysis of intelligence.

From the OSS the present day intelligence community inherited certain assets. Among these were records and some methods and means of procuring both overt and secret intelligence. There were certain basic counterespionage files developed with the advice and assistance of some foreign intelligence services, particularly the British. There was a considerable reservoir of knowledge of procedures for research and analysis of basic intelligence information. There were some skilled personnel. Finally, but far from last in importance, there were agreements with key foreign intelligence services.

The history of the OSS, and particularly its relationship with other US intelligence organizations during World War II, is far too detailed for discussion in this essay. But it should be noted that shortly after the creation of the Office of Strategic Services, top-level officials in the US intelligence community started to think about a peacetime intelligence service. On 25 August 1942, Brigadier General John Magruder wrote a paper on a proposed plan for a joint intelligence bureau which would be an agency of the Joint Chiefs of Staff. For the next two years there was considerable discussion of this and similar papers.

On 5 October 1944 a document was originated in the office of General Donovan entitled "The Basis for a Permanent World-Wide Intelligence Service." Certain of the principles enunciated in this document are interesting, to note. This service would collect, analyze, and deliver intelligence on the policy or strategy level. The proposed organization would have its own means of communication and control over its secret operations. It would not interfere with departmental intelligence and it would not have any police function. An individual rather than a collective responsibility for national intelligence was proposed. Finally, the director of the proposed organization would be responsible directly to the President.

It is interesting to note that Secretary of War Stimson commented on the subject of intelligence coordination in his biography "On Active Service in Peace and War." This quotation reads: "Stimson was insistent that no impatience with its occasional eccentricities should deprive the Army of the profits of cooperation with General Donovan's Office of Strategic Services. Throughout the war the intelligence activities of the United

States Government remained incompletely coordinated, but here again it was necessary to measure the profits of reorganization against its dislocations and on the whole, Stimson felt that the American achievement in this field, measured against the conditions of 1940, was more than satisfactory. A full reorganization belonged to the post war period."

On 18 January 1945, the Joint Strategic Survey Committee reported to the JCS on the subject of a central intelligence organization. The members proposed first a national intelligence authority composed of the Secretaries of State, War, and Navy and the Chief of Staff to the President. There would be an advisory board consisting of the heads of the various intelligence services. The new organization would have the power to inspect the operations of the various departmental intelligence services and would have the responsibility for protecting sources and methods.

At this juncture the press got wind of the discussions for creating a new intelligence organization and, on 9 February 1945, fairly complete details appeared in the Chicago Tribune and the Washington Times Herald. There was considerable furor, and some members of Congress took a dim view of the creation of what they felt might become a peacetime "gestapo."

Shortly after this — just a few days before his death — President Roosevelt asked General Donovan to get together with the heads of the various intelligence and security services and get a consensus of views on a central service. Donovan did this and also went further and queried by letter all of the members of the Cabinet. Within the intelligence community there was general agreement that a central service might be appropriate, but there were several conflicting views as to whether it should report to the Joint Chiefs of Staff, to the Department of State, or to the President, and there was also controversy as to whether there should be individual or collective responsibility for national intelligence. The response from the Cabinet members was varied and ranged from yes to no.

After open hostilities had ceased, (as we all vividly remember,) there was almost frantic haste to demobilize not only the military services but many of the war agencies. On 20 September 1945, the OSS was disbanded. Its Research and Analysis Branch and its Presentation Unit were transferred to the Department of State; its Secret Intelligence and Special Opera-

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tions Units were transferred to the Army, and the ²former were preserved in the Strategic Services Unit which reported to the Secretary of the Army.

On 22 October 1945, a report prepared by Ferdinand Eberstadt on possible unification of the Army and Navy, recommended a central intelligence organization and a national security council. On 14 November 1945, the Secretaries of State, War, and Navy met, discussed the proposed central intelligence organization, and set up an interdepartmental working committee to attempt to arrive at a unanimous recommendation.

The end product of these reports and committees was the issuance on 22 January 1946 of the Executive Order creating the Central Intelligence Group. This Executive Order reflected much of the thinking and work that had gone on during the war. A National Intelligence Authority was created, composed of the Secretaries of State, War, and Navy and the Military Chief of Staff to the President. The Director of the Central Intelligence Group was designated by the President, and personnel were to be assigned from the respective departments as well as recruited from civilian life. The Director of the new Central Intelligence Group was charged by the Executive Order with preparing plans for coordination. The new organization could inspect the activities of departmental intelligence if such inspection were approved by the National Intelligence Authority. It could recommend policies and objectives. It was responsible for correlating, evaluating, and disseminating intelligence and for the performance of services of common concern and such other functions as directed. The Executive Order explicitly stated that the departments would continue to collect, evaluate, correlate, and disseminate departmental intelligence. Finally, an Intelligence Advisory Board, composed of the heads of the service intelligence agencies, was established to advise the Director of the Central Intelligence Group.

With the creation of the Central Intelligence Group there commenced a process of accretion of functions taken from the wartime agencies and from departments which were anticipating reductions in budget under peacetime conditions. The Strategic Services Unit was transferred from the Department of the Army and became the Office of Special Operations — charged with espionage and counterespionage functions. The Washington Document Center was taken over from the Navy

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and shortly after that the Army's German Military Documents Center at Fort Holabird joined this unit and together became the Foreign Documents Division. The Foreign Broadcast Information Service, an organization with worldwide bases for monitoring all non-coded radio traffic, which had originally been under the Federal Communications Commission, was transferred from the Army and became the Foreign Broadcast Information Division. During World War II the Army and Navy and OSS, and occasionally other agencies, had all approached US businesses and institutions in search of foreign intelligence information. An early agreement was reached that this domestic collection should be performed as a service of common concern by Central Intelligence with other agencies participating as they desired, and this became the Contact Division. Another illustration of the type of functions taken on is the division of responsibilities with the Department of State on biographic intelligence. (The list would be much too long if we attempted to enumerate all of the functions acquired in this method.)

Slightly over a year and a half after the creation of the CIG—on 25 July 1947—the Congress, utilizing most of the features of this Executive Order, passed the National Security Act of 1947, creating the Central Intelligence Agency.

Thus, the mission of the Central Intelligence Agency becomes fairly obvious with the preceding background. The National Security Act of 1947 describes the general mission with emphasis on coordination and on performing services of common concern. It should be clearly noted also that the legislation assigns two roles to the Director of Central Intelligence and the Deputy Director of Central Intelligence — over-all coordination, as well as the role of head(s) of an Agency.

STRATEGIC THINKING AND AIR INTELLIGENCE

Major General James H. Walsh

My purpose in this article is to discuss, in very broad terms, some of the significant aspects of air strategy for the future and the vital functions that intelligence must perform in order to insure the success of future air operations. The suspicions currently entertained that the Soviet *sputnik* may be getting intelligence of both meteorological and cartographic nature required for accurate firing of ICBMs illustrate some of the possible relationships between air power and intelligence. In a rudimentary way, even the first earth satellites point up the tasks and capabilities of future intelligence systems required for survival under conditions of international technological competition — intelligence systems which must meet three basic criteria: global coverage, instantaneous discovery, and absolute accuracy.

I believe that we have a reasonably good understanding of past and present concepts of air warfare and the relation of intelligence to those concepts. It is far more difficult to look into the future and to do so with the precision and clarity needed to prepare ourselves effectively for the trials and dangers ahead.

The reason for this basic uncertainty is not that many people have neglected the problems of aerial technology and its strategic implications. The reason is rather that we are in the midst of a technological revolution. Changes are becoming so rapid, so penetrating and, in many instances, so contradictory that the direct and indirect results of the technological revolution tend to control — and at the same time to confuse — the nature and application of tomorrow's air strategy. Nevertheless, it is in this setting of dynamic technical change and a world beset by what often seems an unlimited number of related and unrelated political, economic, and military problems that we must attempt to examine the future direction of air power.

To begin with, we already have seen major alterations in the basic nature of air forces since World War II. The transition

to jets, nuclear weapons, sonic speeds, countless black boxes, and, to a degree, missiles typifies the changed environment which governs today's air capabilities as compared with those of 1945.

Fifteen years ago the RAF qualitatively was the world's leading air force. Today it is in third place. More important, it is not in a class, by a broad margin, with the air forces of the US and the USSR. It has neither the aircraft, the equipment, the bases, the research and development, nor the funds to become again a truly self-sufficient force, with strategic capabilities as required by world conditions.

Fifteen years ago the Soviet Air Force was an adjunct of the Russian army. Statistically it represented a force in quantity, but it had poor operational know-how and no strategic capability. Its aircraft were fair, at best. Today the Soviet Air Force is the largest in the world. It is equipped with modern weapons, some of them as advanced as those of any other nation. It has a well-funded and aggressive research and development program. Although it still has many weaknesses, the Soviet Air Force is making a bid for world air mastery.

The US Air Force also has come of age in the postwar period. It has held the quality lead for most of that time and still holds it for most of the important equipments. Its personnel are superior in training and efficiency. But the USAF has problems, especially in areas outside the SAC program. Its progress is not to be belittled, but in some areas its progress perhaps has not been so fast or so forward as we would like it to be.

The fortunate aspect is that during the postwar period the USAF has grown to be a global force. In fact, to this date, the USAF — not forgetting its naval support — is the only global force extant. This American capability is a fact of overriding importance. It will remain a controlling factor in the international power equation, to a certain extent, irrespective of technological slippage and of the inevitable acquisition by the Soviet Union of a global missile force.

The most important single change since World War II is that atomic airpower has become the dominant military force. The only way a nation can deliver nuclear firepower over long distances and in a short time is through the air. Sea and ground delivery of nuclear warheads is important, particularly in special situations. But in terms of a global nuclear war, these

systems — and some of the secondary means of aerial delivery — can do no more than furnish local, regional, and tactical support to the strategic air strike forces.

One of the changes upon us deals with defense in nuclear aerial war. Whereas the offense still seems to have outdistanced defense, the old axiom that like weapons are the best defenses against like weapons again could become true.

For the moment there is very little one can do when an atomic explosion occurs except to be underground, fully equipped with food and non-contaminated water or, preferably, plenty of Irish whiskey. Nevertheless, the very possession of nuclear weapons for defensive purposes may act as a "preventing" factor — not because even the best defense would be capable of halting an attack, but because a good defense system would boost the force requirements of the attacker, lower the probability that he can execute his plan with full success, and thus, in some cases at least, tend to induce him to delay his aggression until he has reached the required force and technological levels. It is in the nature of a "race," that the aggressor may be unable to achieve such a posture of superiority that he can dare take the risk of nuclear attack. If this should be a vain hope, for example, because the defender has failed to keep up with the pace of the race, the actual use of nuclear warheads against incoming vehicles should reduce the effectiveness of the offense.

Some of our forward looking scientists are optimistic about the feasibility of employing anti-ICBM missiles, which would take advantage of the greatest point of vulnerability of the early ballistic missile, its fixed trajectory. Many ideas have been proposed about nuclear predetonation and sophisticated employment of modern electronics to interfere with incoming nuclear attack.

There are a number of passive defensive steps which could be taken to lessen the vulnerability of our retaliatory force. These include the dispersal of aircraft and missiles, shelters, and other forms of base hardening, short exposure times, rapid reaction procedures, and maintenance of a substantial portion of the alert force in the air at all times.

Unfortunately such systems can be very costly. They are limited in their coverage and may not be reliable enough for

the safety of personnel and certain equipment. Elaborate passive defenses tend to disrupt and slow the ability of an air force to retaliate as rapidly as required. For these reasons the strategic effectiveness of passive defense is predicated upon effective warning. By warning I refer to technical alarms such as radar and infrared sensing and to interrelated strategic and tactical indications intelligence.

The true effectiveness of defense will be a function of the scope, size, quality, and mental effort put into requisite weapons systems needed to furnish capabilities for protection, warning, interception, and countermeasure tasks. It may be dubious whether or not even the best defensive system pitted against combinations of different types of attack weapons ever will attain a high kill rate, but this may not be the critical point.

Rather, countersystems embodying nuclear warheads and built around effective warning and reaction responses suggest that a nation may be able to close the gap between the power of the offense and present limitations on defense. Such systems could pre-empt the advantage of surprise by sneak attacks by an aggressive nuclear delivery force. They would force the attacker into more elaborate and costly delivery means, primarily large and massive raids which are susceptible to strategic and tactical detection and to interception measures.

Through all these means and measures the offensive may not necessarily be priced out of business, but its effectiveness should be reduced against its primary objective — the opponent's retaliatory force. Thus, it would be hoped, the attacker would be induced *not* to strike because of the uncertainty over the success of his initial blow and also because he would have to risk his main force at excessive loss rates. In nuclear war the first blow must be decisive: the retaliatory force must be killed.

It is quite clear that intelligence influences the effectiveness of defense. Whatever the technical proficiency of a defense system, it can be improved by better intelligence, whereas even the technically most promising defenses can be invalidated through intelligence failure anywhere along the "assembly line" — from scientific intelligence to tactical warning. Perhaps it should be observed that good intelligence would allow the utilization of foreign scientific and technological achievements for the improvement of our own posture. Beyond pro-

viding us with better design patterns, such intelligence also would enable us to build our equipment to such specifications as to optimize its capabilities against the enemy's weapons.

I should like to turn now to a discussion of various technological factors, some of them here now and some on the horizon, and try to relate them into a strategic pattern.

During the years ahead we shall be approaching practical terminal limits in certain key parameters of weapons systems. We already may have reached what could be called terminal explosive power, not that it would be impossible to achieve higher yields.

Within the next few decades we probably will attain terminal speeds, at least for terrestrial operations. We cannot exceed certain speeds without being forced from the earth's gravitational field. Before we achieve theoretical terminal velocities we should reach a far lower practical speed limit for operations directed against targets on the ground. We must remember that the attainment of maximum speed in flight may require more time than would be necessary to reach a terrestrial target at lesser speeds.

We certainly shall be capable of terminal ranges in the sense that future air and missile systems will be able to circumnavigate the globe at least once. I am convinced that there will be no practical limits to altitude, although there may be temporary barriers to surmount before manned and powered space flight becomes a reality. Such restrictions could occur in metallurgy, engines, communications, aero medicine, and nuclear components, among other fields.

Let me dwell for a moment on the relationship of altitude to tomorrow's air strategy. In the immediate future, altitude essentially will be a matter of tactical advantage inasmuch as, with respect to powered flight, we still shall be competing in heights measured by thousands of feet. We have come to recognize that the attack force with the higher altitude capability, generally speaking, is the force with the greater penetration capability. To achieve tactical altitude advantage we are moving into speeds up to Mach 3 as a result of improved rocket fuels, higher thrust engines, aerodynamic advances, and even newer black boxes. I am talking about situations up to 100,000 feet.

But today we also stand on the threshold of entirely new altitude dimensions. Space vehicles already have been climbing to heights of 600 miles, and unpowered satellites, or *sputniks*, are flying around the earth approximately every hour and a half, at heights up to over 1,000 miles. This altitude is by no means a limit but soon will be exceeded. Disregarding the future development of orbital flight, even at this point the significance of the recent quantum jump is that we are acquiring the capability of staying in the air.

This overriding technological fact will have the most profound impact upon military operations. At present altitudes, the airman must worry about hurricanes, fog, winds, and other weather factors characteristic of the dense air which lies just above the earth. Tomorrow's space flyers must be concerned with meteoric showers, cosmic radiation, electronic barriers, and Buck Rogers' conditions within his cabin. Instead of using flight as a means of traveling from one point on the earth's surface to another, either for friendly or unfriendly purposes, the new problem will be to reach an orbit, maintain it, and utilize nonpowered flight for scientific, military, and probably economic purposes.

The flying machine of outer space will not spend 90 percent of its time on the ground, but 100 percent of its time aloft. In simple statistics, we are moving from transonic speeds and periodic flights of several thousands miles in length into an environment where speeds will be of the order of 16,000 knots and "ranges," depending upon the height and shape of the orbit, easily may exceed 1 million miles per day and hundreds of millions of miles per year.

The development of terminal weapons — in terms of explosive power, range, endurance, and speed — will not bring the technological race to an end. Strategies will capitalize on the new dimension of altitude and perhaps endurance rather than distance as a decisive area of military competition. Military superiority will be dependent upon relative advantages in electronics, warning, and deception. Thus the sciences of instrumentation and intelligence will become truly decisive elements in the equation of a strategy in which the chief maneuvers seek to conquer altitude and achieve enduring control from the ground to outer space.

Modern air strategy will be affected by a number of additional problems, each of which could become crucial in varying circumstances. There is, for example, the requirement that a portion of the aerial strength must be on constant readiness status. A strike force that requires one or two days to get ready is a military liability. Even in today's war it would be caught on the surface.

An effective air force must be numerically strong and able to get its combat aircraft into the air in time. It must be located on a large number of bases, preferably distributed on several continents and located at varying distances from the enemy. Moreover, it must be supported by reconnaissance forces operating vigilantly around the clock. Only such an air force is in a position to achieve a strategic, though not necessarily physical, invulnerability.

In former wars, material strength was the decisive factor. The speed with which fire power could be delivered was an important but still a subsidiary element. The nature of a future war is essentially no longer a dispute about territory but a competition for gains in the time dimension. This is because, in the first place, technology is a variable in time. The speed with which this factor varies will continue to increase as long as technological progress continues. In the second place, surprise being a key to success in air and missile warfare, the initial rounds of conflict are little more than a contest to operate faster than the opponent. Surprise attack will be successful if the attacker moves faster than the defender. It will fail if the defender's "reaction time" deprives him of targets and disrupts the attack schedule.

Intelligence must come to closer grips with the time dimension. We are dealing not with one uniform period but with a whole set of different time categories. There is the time problem of maturing manpower, scientific discovery, and technological invention — measured in generations. There is the duration of research and development programs, decisionmaking, production, and incorporation of weapons into battle orders — a period of years to decades. There is the complex problem of warning — ranging all the way from advanced strategic warning measured in weeks, months, or even years, to tactical warning, measured in minutes. There is the problem of reaction time and interception, measured in seconds and microseconds.

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Pre-emptive, retaliation, deterrence, counterforce, retardation, and disruption attacks all, in one way or another, are tied to a specific time requirement. The more mobile warfare becomes, the more moving targets are assuming significance, the less it is a question of mere "capability" than of "capability in time." An airplane carrying a high yield weapon can knock out an air base; the problem is to destroy it at a time when the target will be most lucrative — for example, just before the moment when an attack is to be launched from that target. Need I add that only intelligence can provide this all-important "timing capability"?

Perhaps an additional illustration will clarify this thesis further: "Reaction time in guided missiles." It is important to count missiles in terms of numbers, warhead yields, and the like. But the foremost problem is that of reaction time or response.

If it takes a strategic missile force four hours to launch, whereas the opponent can launch within minutes, the obvious advantage belongs to the side with the shorter reaction time — provided it has adequate warning. The 4-hour reacting force will never leave the ground; its threat will be pre-empted. If this is correct, it appears to be a mistake for intelligence to count the degree of deterrent power primarily in numbers of missiles or warhead yields. It will be necessary to assess, above all, relative times of reaction.

Earlier we discussed the new parameters of altitude. It is appropriate, I believe, that we reflect on the purpose of operating at such altitudes. The use of outer space will permit almost continuous observation of any point on the earth, a situation which, although not entirely without precedent, marks a new departure in modern strategic warfare. Space platforms are becoming indispensable elements of effective warning systems against future means of weapons delivery. Unless we conquer space, a great deal of the scientific knowledge which we require to remain in the technological race will not be available.

Furthermore, orbiting vehicles eventually will be used as weapon carriers and thus will develop into crucial components of offensive and defensive missile warfare.

All this poses the spectre of outer space military conflict which will involve three phases: first, the competition to get

vehicles into space in sufficient quantities to occupy desirable orbits and to make profitable scientific use of orbital flights; second, the development of military techniques for operating from our own orbits and for countering the enemy's militarily significant orbital activities; and third, the ability to neutralize or destroy terrestrial and aerial components of orbital systems.

This new sphere of warfare raises some perplexing problems in world relations. In addition to traditional surface boundaries, there will arise sovereignties over vacuous orbits and the areas beneath them—a system of interlaced surface and spatial boundaries thousands of miles in depth and tens of thousands of miles in length.

A new pattern of international relations must be developed in which orbits are occupied peacefully or conquered and in which orbits must be delineated. During peacetime the nations must respect each other's scientific and security operations in the orbits, and in wartime, of course, the purpose will be to eliminate all of the opponent's space vehicles. In turn, there must be capabilities for protecting the satellites. It is clear that this involves entirely new types of "aerial" operations, as it is also clear that the diplomats and international lawyers will have to do some hard thinking to settle peacefully the problems of orbit allocation and orbit sovereignty.

The introduction of the orbital dimension into warfare signifies that factors such as Iron Curtains, the dispersal of air bases and missile sites, and the ability of navies to "hide," so to speak, in the vastness of the oceans will tend to lose significance. The nature of the new implements is definitive enough to suggest that the use of truly underground and of undersea facilities may dominate the terrestrial scene. As a result, the roles and techniques of surprise will undergo very profound changes, the exact nature of which we cannot predict.

For a nation to exist and survive under these conditions, its intelligence system must become a predominant security technique. Such a system must meet three criteria: global coverage, instantaneous discovery, and absolute accuracy. The system must be fully operational both in war *and* peace. Intelligence must be run not only for the benefit of, but *by* those who are responsible for decisions of life or death.

I believe I have reached the point where it is necessary to examine this strategic framework with its epochal implications

in the practical light of where we are today and to consider the future directions we must take.

The problems of strategic and technological surprise are becoming increasingly serious. The danger of tactical surprise is not lessened when the enemy, in addition to a high altitude and rapid strike capability, also has a capability for low altitude air attack and may be developing mixed high and low altitude offensive forces.

Taking an even broader view, we can say that the nuclear explosive and the supersonic delivery vehicle have appeared at a moment when society is quite defenseless against such weapons. During the last few centuries, war has taken place at the margins of society. Society supported the war from its production surpluses and remained intact as a going concern despite losses and devastations.

You recall that during ancient times, the situation was different. During the Middle Ages, every town had to be self-sufficient for defense, with walls, moats, shelters, food, and water reserves. Practically every citizen had to bear arms. The American frontier town serves as a more recent example of this dangerous way of life.

I believe that society eventually will adjust itself to the modern technology of destruction. Perhaps we may have to become troglodytes; our ancestors were. Architects may develop new types of resistant houses and "safe" urban settlements. Perhaps we shall develop anti-radiation protection. The principle of "hardening" can be applied to many human needs.

I am predicting only that the human mind will not stop inventing. After it realizes the grim threat of modern weapons, society gradually but inevitably will take measures to assure its survival. I am basing this prediction on my faith that modern man, morally and intellectually, is not inferior to previous generations of 700 and 2500 years ago.

Whether this process of social adjustment is going to last 20 or perhaps 50 years I am unable to say. But during this interim phase, humanity well may be passing through the greatest peril of its existence. A war five years from now probably will be immeasurably more destructive than a war around 2000 A. D. Our security, therefore, must be tailored to get us and the Free World safely through this immediate period of extreme hazard.

It is this interim character of the present military situation which confronts us with many perplexing problems. Defense planning, which includes intelligence, is faced with numerous paradoxes.

In this age of maximum offensive strength, there may be a great deal of reluctance to use up-to-date weapons, simply because no one wants to unleash a nuclear war. Yet we must prepare ourselves for a contest which requires us to put the bulk of our resources into nuclear armaments. As a result, we may have only limited capabilities to wage war in which nuclear weapons do not provide the basic fire power.

Yet some people have gone so far as to advocate the retention of full-fledged non-nuclear forces in addition to atomic forces. It is generally agreed that we should prepare ourselves to fight with nuclear weapons. Yet some contend that we also should retain a capability to fight in the style of World War II — high explosives on the ground, at sea, and even from the air.

We probably could agree that the availability of non-nuclear forces would be very advantageous. Several types of non-nuclear explosives will remain with us, even in the nuclear age. Under certain tactical conditions, those may be even more effective than nuclear materials, which is the main reason why they should be retained.

Unfortunately, the question is not one of advantage or disadvantage, or even of choice. The question is one of capability in all aspects — manpower, military organization, research, funds, training, equipment, tactics, and so on.

Suppose that we maintain both a nuclear and a non-nuclear defense establishment. There is the high probability or near-certainty that the investment in non-nuclear arms would be invalidated as soon as the first atomic weapons are used. This will happen, almost inevitably, at the first serious military setback of either belligerent.

But the question of non-nuclear armaments is not just a matter of duplication. The cost of matching atomic systems with non-nuclear weapons in terms of relative military effectiveness would be exorbitant. More significant, such a second force could not be established on any reasonable scale unless we acquire two sets of our national resources, two sets of our qualified manpower, and two sets of our country.

I am not raising the issue of limited versus general war. The requirements of any local war situation can be met from available and programmed forces and resources.

Rather, I am addressing myself to the problem of attempting to build a non-nuclear force at the expense of our atomic strike and defense units, which must be maintained at an increasing degree of readiness because of the overwhelming priority of the Soviet nuclear threat to the US and the Free World. We cannot turn back. There may be a collapse of nuclear courage, but no longer can there be any doubt that we have crossed the nuclear Rubicon.

A similar paradox confronts us in disarmament. If the danger of attack could be eliminated by reductions of force levels and by the outlawing of particular types of weapons, the security of all nations unquestionably would be enhanced. The trouble is that with the power of modern weapons, even minor infractions to disarmament agreements may prove fatal.

After 1919, the Western Powers tried to control German armaments. But practically every week a German arms violation of the Versailles Treaty was reported. Many work shops repeatedly were discovered in which, it was said, machine guns were being produced under the guise of baby carriages.

Nevertheless, the security of the Western Powers did not seem vitally threatened, despite the fact that the Germans maintained secret arsenals and continued surreptitiously to produce weapons which they were not supposed to have. These weapons did not seem powerful enough to pose a real threat to Western security. Neither were the camouflaged divisions which the Germans maintained secretly.

But in our time a nation which produces perhaps as few as 50, or as many as several hundred high-yield weapons could become a real threat to the peace, even with makeshift delivery vehicles, especially if other nations faithfully adhere to their disarmament agreements. You are well aware of ominous infractions to such agreements in North Korea.

The point is that we cannot go back in history and undo the discoveries of nuclear fission, electronics, and aviation. We have to live in the modern world. Technological progress will tend to "break through" even the most elaborate and sophisticated disarmament "controls." Each breakthrough will neces-

sitate renegotiation of agreements. There will be little, if any, stability and durability, let alone guarantee of assured international safety in such arrangements.

I confess that this is a very dismal picture. It will not be changed by expectations that the human race will become peaceful and angelic in the next 20 years. There are two brutal facts which we have to remember. The first is that the Soviet regime still is around. Although it sometimes seems to be showing signs of middle or even old age, there is no new evidence that proves that Kipling was wrong when he wrote: "Make ye no peace with Adanizod, the Bear who walks like a man."

The Soviets have not changed their basic objectives. Their policies have remained constant in areas that count, including their fantastic military preparedness effort. It is clear that the Soviets do not expect that the millennium of peace has dawned. While they prepare for war we cannot turn our backs. When they talk conflict, we cannot risk to ignore the peril. When they arm themselves with the most modern weapons, we cannot reduce the magnitude of the threat by wishful thinking about their supposed inability to do that which manifestly they are doing.

We can philosophize that the Soviet Union will enter into an evolution which, after some time, will transform the present Bolsheviks into Jeffersonian Democrats or Puritan pacifists. I do not believe that anyone who has studied Russian and other revolutionary history seriously expects such a mutation will take place.

Naturally, I do not postulate eternity for the Soviet system: their time will come. The question is, when? So far, reports about their demise usually proved quite "exaggerated." Their resilience has been extraordinary. Distinguishing our hopes from realistic planning assumptions, we would be foolhardy not to give them an additional life expectancy of one or two decades. We *must* assume that they will remain in power during the entire period when the technological challenge to the US will be at a maximum.

It is not certain, of course, that the Soviets deliberately will launch an attack on the US. But at the same time we cannot be sure they will not. In the same vein, there is no doubt but that the social system of Russia is changing in many ways.

But is this necessarily a favorable development? One danger surely is that if the Soviet dictatorship were liquidated by force or otherwise, this event — which only optimists expect at this time — could precipitate a major internal crisis. Such a crisis would be uncontrollable. This means that it could lead very easily to a world conflagration. There just is no way by which we could conjure away the ominous dangers in our future.

This leads me to the second point of pessimism about peace in the foreseeable future. It is a mistake to consider the Bolsheviks as the only cause of conflict. Wherever we look at the continents today, there is plenty of politically combustionable material. Old political structures are breaking down. New nations are emerging. Most of them have their own imperialistic ambitions, and some of the older nations show frightening signs of decay. Economic difficulties, cultural transformations, intellectual crises, and ideological passionsacerbate many of these political changes, not to mention inflammatory propaganda campaigns, political warfare, and the like.

Unfortunately many of the political minds still function as though we were living in the time of gun powder and sea power. Few have grasped the significance of the modern technology. There is a dangerous timelag between political thinking and technological reality. As industrial technology advances, psychological stability weakens. We must admit the possibility that world society will grow sicker and ever more unstable, even as the descendants of Icarus reach out for the moon.

It is unjustified, therefore, to expect that all nations will observe restraint in order to avoid nuclear conflict. Perhaps most nations will, but the odds are that there will be a few who will act irresponsibly. Hitler was not the last specimen of his type.

Recent sociological research asserts that a large percentage of political rulers and regimes have been, historically speaking, criminal in motivation and action. There is no doubt that many rulers, especially those who acquired unlimited powers, may have been, at least partly, insane. In fact, a German historian coined the term "Caesarian insanity" in order to describe the actions of many Roman emperors.

Although we have made some political progress, the world nevertheless has had more than its share of insane, criminal,

and power-hungry rulers during the 20th century. Crime and insanity rates tend to rise as industrial civilization advances. It may be very convincing to us to say that because of the existence of hydrogen weapons the power-seekers should mend their ways. This type of argument remains unconvincing to the evil doer who is willing to accept the risk, regardless of the consequences.

There is only one way to reduce the probability of criminal aggressiveness. That is, to remain militarily overpowering and mentally more vigilant than the would-be aggressor — to outsmart and outarm him at every turn and to apply persuasive techniques to protect him — and us — from making a miscalculation. It is not enough to possess what could be called a “statistical posture of deterrence.” The aggressor also must be convinced that it is inadvisable for him to break the peace. But do we master the techniques by which we could have such an impact on the opponent’s mind?

We are in the midst of a lasting crisis which Mao Tse-tung has described as “protracted conflict.” Political and psychological weapons are being used every day to advance the Communist cause. In modern conflict, even though actual shooting may not be taking place, air power and the threat of almost instantaneous massive destruction have become the key elements of the psychological as well as the physical struggle.

The extent to which we can deter the opponent from attacking us determines our freedom of action on many of the world’s battlefields. If the level of our ready deterrent strength is too low to provide the assurance that the enemy will not react with an all-out attack, we could be inhibited in executing proper defense actions in subsidiary theaters.

Deterrence is a necessary condition for the maintenance of peace — and the waging of limited war — but it cannot be a static condition if it is to keep that peace. If any nation acquires a more effective weapons system, the best posture of deterrence existing before the technological mutation is subject to rapid nullification. We live in a world where the threats to tomorrow’s peace are developing today in the laboratories and on the drawing boards.

It is true that so long as the two main competitors run neck to neck, even a major advantage in one or more technological fields may not necessarily upset the balance. A state of mu-

tual deterrence may be reached which essentially would mean that a world conflagration could occur against the deliberate planning of both the US and the Soviet Union. Hence I do not believe that the Soviets merely are trying to catch up in the technological race. On the contrary, they seem to have organized themselves to win the technological race on a broad front, not only in many significant scientific areas but also in combat operational strengths as distinguished from mockups and prototypes. In other words, they may be trying to surpass us simultaneously by at least one whole and perhaps two weapons generations.

The technological race is the very essence of protracted conflict. It is the main event which we cannot afford to lose. The essence of this conflict is not, as many of our contemporaries believe, a series of limited wars in the jungle and in the desert. Any American intervention into limited war depends crucially upon our relative technological posture. If we lose the technological race we cannot fight on local and regional fronts. Nor will an increase in our capability to fight in Bali or Timbuctu improve our over-all deterrence. It certainly is not likely that, should the US fall behind in technological capability, the Russians will press their advantage merely to get a few fringe benefits. The struggle between Rome and Carthage is more meaningful to our times than the formalized and restrained war-tournaments of some epochs in the history of Christian Europe.

Technological superiority in means of delivery is the essence of success in nuclear war. The idea that nuclear war will take the form of an exchange of mutual blows perhaps forecasts correctly what is going to happen. However, this is not necessarily a concept on which the military planner should work. The purpose of planning for nuclear war is to achieve such a predominance of strength that a nuclear blow can be delivered, without the undue risk that a deadly retaliatory blow will be returned. Even the Soviet military leaders who, during the Stalinist period, belittled the importance of military surprise now appear to recognize that surprise could be the condition of nuclear success.

The acquisition and maintenance of a dynamic capability to deliver a rapid and devastating blow — plus a proportionately dynamic defense — are prerequisites to survival. The nation

which insures that its retaliatory force is, in fact, effective at all times, is obtaining maximum protection against preventive and pre-emptive attacks. The success of preventive war and pre-emptive nuclear launchings depends upon the achievement of triple or quadruple surprise — technological, tactical, timing, and conceivably strategic. The US can keep its retaliatory guard up only if it is able to render those surprises too costly, too impractical, and too uncertain. Thus surprise attack will be too risky for enemy resort only if the US keeps ahead in technology and intelligence, as well as in its force levels and, above all, in reaction times.

Should we lose tempo and should one or more of these four pillars of our security crumble, the enemy's superiority may become such that he need not use nuclear weapons except as a threat. The so-called ultimate threat of large hydrogen weapons could become "demilitarized" — by manipulated fear. Suppose the aggressor says: "I grant that you can retaliate, but you will be completely devastated through my first blows. We leave it to you whether or not you want to elect your own death. If you retaliate, you will die, at best with the comforting thought that you have killed some of us. Or you may survive under our whip. That is your alternative." It is known that the Soviets are doing considerable research on conditioned reflexes and brain-washing techniques. Manipulated fear and the conditioning of the opponents' mental and psychological reactions are strategic concomitants to nuclear weapons. The Soviets don't overlook a bet.

Previous wars have lasted for years. Ever since the emergence of a modern industrial society with its long mobilization requirements, war could not be short. A future war may be decided within a matter of a few hours. I think it is wrong, however, to place all attention on the destructive phase of this type of conflict.

In previous times, the length of the war allowed us to remedy the shortcomings and omissions of peace. Today and tomorrow, once the climax of the conflict has come, we shall be the prisoners of our previous decisions. In that critical phase we shall not be able to increase our force levels, acquire a new set of technological weapons, adjust our tactics to outdo those of the enemy, or even reassure the fearful and give orders to the panicky.

The protracted conflict may last longer than any previous war. Although the climactic or decision phase of this conflict may be short, still, the conflict could endure for many decades. We are in the battle now. As a consequence, the main battles are being fought by military forces in continued readiness, by warning and intelligence services, by the research and development community, by national and industrial planners, and by budget makers, as well as by moral and intellectual attitudes.

Militarily speaking, the decisive phase could be won or lost by the staff and operational officers who 5 to 10 years before the shooting select or reject certain weapons systems, succeed or fail in shortening lead times, organize offensive and defensive forces, determine the balance between force elements, and plan deployment and reaction times. It also may be won or lost by the executive and congressional branches which decide, with a timelag of 2 to 3 years, the force levels to be maintained in any technological phase; by the weapons requirement, procurement, and logistics planners within the military; and by industry, all of whom, together, have the task of developing and producing superior weapons faster and in larger quantity than the enemy; finally, by intelligence officers who must try to forecast the relative strengths and weaknesses of the strategic equation 5 to 10 years ahead. The latter will succeed — or fail — depending on whether or not they convince the powers-that-be that their best estimates are valid.

In protracted conflict, the climactic phase may be war in its most extreme form. If the climax is a matter merely of threat and surrender, it will be the most "peaceful" of all wars. To intelligence its most significant aspect should be that protracted conflict is a war during peace.

It is easy to enumerate the need to win the technological race, the requirements for adequate numbers of weapons and forces, the advantage of hardened and dispersed base locations, the necessity for fast reaction times, and so forth. But the basic reason these requirements are difficult to satisfy is that no nation has the economic capability to live up to the exigencies of protracted conflict in the early period of the nuclear age.

I am not talking about budgets which can be increased and reduced. I do not mean various degrees of economic mobilization and readiness. Rather, I refer to more fundamental limitations.

To win the technological race a nation needs numerical and qualitative superiority in technicians and inventive geniuses. Unless the most revolutionary educational changes are made, it is unlikely that sufficient scientists and technicians will be produced to satisfy the growing needs of increasingly complex military programs. Even a program which marshaled all educational resources into scientific and technical curricula probably would be inadequate for acquiring that degree of technical superiority and material effort which makes the launching of a nuclear attack or the psychological threat of such an attack a relatively riskless affair.

The cost of weapons systems is rising geometrically, while the increase in productive capabilities proceeds much slower. There is the problem of protecting and rebuilding our cities and facilities to survive in a nuclear environment. This is a problem — so far largely untouched — which clearly accentuates the severe limitations on our economic capabilities to meet the challenge of the nuclear age. In this time of economic plenty, scarcity still is the supreme fact of civilian and, above all, military economics.

Material resources are not the only limiting factor. Time, which is a major resource, also is in short supply. For example, the time needed to transform a blueprint into a modern weapons system has become such that a military force never possesses an active arsenal without at least some obsolescence. I mean obsolescent in the sense that certain tasks simply cannot be accomplished against opposition or must be undertaken at excessive risks and costs.

There is one inescapable conclusion from this discrepancy between requirement and capability. It is this: the future strategist has the potential choice of an entire technological spectrum of weapons. At least several weapons systems will be able to do the same task.

Because of the technological potential available to both sides, he will have to decide whether to select a faster or slower weapon, an explosive with greater or lower yield, a weapon of endurance or of stealth. Should he guard against high or low level attack? Should he dispense with manned bombers in favor of missiles? Should he select an earth satellite "anchored" approximately 21,000 miles above its target to de-

liver nuclear firepower — or should he use a submarine from which to launch a missile?

In practical terms the strategist can select only a limited number of systems from this entire technical spectrum, which will grow as we progress further into the scientific era. Strategists on the other side have to make similar eliminations. The chances are that the choices may not be identical because of different strategic objectives, production capabilities, operational doctrines, concepts of defensive warfare, and so forth. In turn, because the choices probably will be different on both sides, the possibility of surprise and other major military initiatives will increase.

Therefore, intelligence must forecast, in ample time and correctly, the enemy selection so that proper defenses can be designed. Of course, the choice of the enemy may impose the need for counterweapons, which may have a feedback against our original weapons choice.

It is necessary to insure that the relationship between what we actually have and what we require to counter the enemy's principal threats is such that we are not accepting undue risks. If we made a poor or overly narrow selection from the spectrum, if intelligence fails to guide the research and development community concerning the enemy's probable selections, we might invite attack, provide inadequate defense, and jeopardize life and liberty. But if our intelligence is keen and our armament effort generous we might ensure peace for the period of the technological cycle.

We are in a conflict which has and undoubtedly will endure for decades but which at present is changing complexion. General J. F. C. Fuller coined the term "machine warfare" to describe World Wars I and II. This expression no longer fully applies to future "technological warfare."

I am afraid that the Communists have shown a rather sophisticated understanding of the strategic problems involved in this new form of technological struggle. They seem to understand interrelations between social conflicts and technical and economic competition. More than that, they are organizing themselves to achieve an overwhelming strategic posture in the technological realm. They are girding to win the technological race against the US. Whatever the disadvantages of a dictatorial system, their regime responds to rapid decisionmaking.

In this area, we do not seem to have matched their strategic comprehension. We are said to have made the decision never to strike the first blow. At the same time we have neglected to introduce sufficiently into our thinking the fact that if the opponent is allowed opportunity to achieve a broad tactical success through an initial blow, the retaliatory strategy must be more costly and complicated in order to compensate for the risk and loss which could occur at the outset and weaken the retaliatory force before it goes into battle.

Under the postulate that the enemy strikes first, defense must be more expensive than under the postulate that we shall not surrender the initiative. It follows that we must not be reluctant to pay the price of our security against an opponent to whom we present the gift of the deliberate surprise attack.

The technological race has engulfed us exactly as a fast flowing river occasionally catches the unsuspecting oarsman. Such a situation cannot be met and overcome by preaching to the river, by throwing away the oars, or by using only one of two hands. In such a situation, all skills and all strengths are needed to ride out the rapids and not get smashed against the rocks.

The fundamental conclusion I want to leave is that the technological race, because of various economic limitations and political climates, may not be won by any super power engaging in the competition, even with all its strengths. But this race very well may be lost by a country which fails to put its continued best efforts into the challenge.

It is to a large extent the duty of the national intelligence community to explain to our nation's leadership the true nature of this strategic problem. I pray that we will not fail in this task which is indispensable not only to our survival but to the survival of civilization.

Intelligence has been getting the facts about the Soviet Bloc, or at least enough of them to enable many right decisions to be made. But we have not been able, often enough, to get our information and evaluations accepted and acted upon. The somber fact is that as professional intelligence people we have not entirely grasped the meaning of protracted conflict in the nuclear missile age.

I believe it not unfair to state also that as professional intelligence people we have been disappointingly slow in under-

standing the nature of the pressing problems which are confronting us. Only too often our categories of analysis and estimates still reflect the strategic realities of a passing age. We know all about the deposits of even the least important raw materials, but we may miss major scientific discoveries. Our battle orders of the infantry are considerably better than those of earth satellites. We are adept in measuring floorspace, but we are rarely engaged in comparing lead times. We are able to refine our calculations of weapons yields to the first decimal, but the analysts worrying about Soviet neuropsychology have yet to break through to the national estimates. We produce mountains of "data," but our progress in data handling paraphrases Lenin's title, "one step forward, two steps backward." We are considerably better in post mortems than in warning. Our understanding of man's greatest resource, time, has remained fuzzy in most areas.

All in all, although we often express our conviction as to how important intelligence is to national security, we ourselves have not quite realized the crucial position we are occupying in the present power struggle. It is really the effectiveness of intelligence which, together with the effectiveness of our scientists, is the basis of technology. Beyond the development phase, intelligence is either a multiplier or a divisor of military strength-in-being. It is the one "weapons system" which by necessity is in constant touch with the enemy, regardless of whether there is war or peace. And in war, of course, intelligence remains a key condition of success.

But we must elevate our sights beyond the old saw of intelligence being the "first line of defense." Intelligence is the factor which should make defense economically practical, technologically superior, and strategically victorious. In the missile age, intelligence literally will merge with the decisive weapons system, lest the missiles be entirely ineffective.

But intelligence will not be able to do this job unless it comes of age as a technological system in its own right. We must get the equipment our ubiquitous, instantaneous, and encyclopedic mission requires. We must have the forces to operate these tools. We must develop utilization techniques which are at par with or better than those equipments. And we must be able rapidly to feed our information to all users.

One feature will remain unchanged: the ability to think. Electric computers and space telescopes are no substitutes for common sense and judgment. Reasoning by false analogy, preoccupation with minor problems to the detriment of major issues, emphasis on decimals and disregard for the large magnitude, wrong philosophies about the rules of evidence, delusionary procedures such as the piling of estimates upon estimates — not to mention normal human failings such as prejudices, wishful thinking, parochial interest arguments, and subversion — all those will remain possible in the era of technological warfare. The machines, even the electrons, are no better than the brains they are designed to serve. It is gratifying to think that when the machine proves to be inadequate — for example, because it may take three months to “program” it — common sense and “conventional thinking” still will be called upon to take its place.

The plain fact is that the machine, however good, will not replace the analyst. The machine will make the human brain a more powerful tool — this is the main reason we need it in intelligence. Intelligence technology is indispensable for the rapid handling of thousands of data and for the reduction of innumerable variables to manageable factors. This technology is the key to speed, coverage, and accuracy; to computation; and to experimentation with, and testing of, our conclusions and estimates (for example, through “gaining” techniques).

But intuition and insight are necessary to make the machines work. In turn, intelligence technology will make its greatest contribution if it allows deeper insights and ever more creative intuitions. Man has remained the key factor in technological warfare, as he was the key to victory when rocks and clubs were the most powerful weapons. Military, or in a broader sense, conflict intelligence will be at its best when it is based on brain intelligence: IQ’s plus wisdom.

Pending the dawn of the technological age in intelligence, we should face up more courageously to the facts of life, however bitter.

As a nation and as the core of the Free World alliance, we have been underrating the danger for more than twelve years. Why was intelligence not more reliable? Why did we fail to see the obvious? Our own thought patterns and our intel-

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lectual isolationism have proved to be far more dangerous enemies to our security than the Iron Curtain and the ominous developments behind it.

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CONCEPTS FOR A PHILOSOPHY OF AIR INTELLIGENCE

Lewis R. Long

I should like to set forth certain concepts for air intelligence that I feel would vitalize an air intelligence philosophy and could lead to an air intelligence policy and doctrine consistent with the dominant role that air power must play in the years to come. I make no claim of originality in all these concepts; nor do I consider that they alone would form a sound air intelligence doctrine. However, together with the valid concepts contained in the doctrinal manuals, they would, I am convinced, provide better guidance to the field than has heretofore been available.

I should like to emphasize that all the concepts presented are meant to be applied within the framework of one overriding concept for a philosophy of air intelligence — that air intelligence is geared to air power in a nuclear age and that it has the same predominant characteristics as has the air force — range, speed, mobility, flexibility, and penetrative ability.

Because air forces have the capability of flying to any point on the globe and returning to any desired location, air intelligence must provide basic information to guide such flights in peace or in war. Because air forces exert a dynamic impact on all forms of international relations, air intelligence must be prepared to expose for the scrutiny of air commanders the entire structure of other nations and to advise and assist in the determination of air strategy and policies.

In the established principles for the successful employment of air forces it is considered that the air forces are an entity. Even so, air intelligence must be considered indivisible and responsive at all levels of operation to employment as a single aggregate instrument. Air intelligence must be employed for the attainment of a common objective, which — in essence — is to contribute to the security of the nation. Air intelligence provides the key to proper employment of the air forces in exercising the initiative in many different conditions of international relations, in taking advantage of different opportunities

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as they occur, and also in creating opportunities in which benefits to the US may accrue by the utilization of air forces in peace or in war. Air intelligence must also guide the air force in exploiting the principle of surprise, in order to attain both military and psychological advantages through speed, deception, audacity, originality, and concentration. For the present, air intelligence must concentrate on indications of imminence of hostilities, without neglecting information on capabilities and vulnerabilities of potential enemy countries. This concentration of effort not only will contribute to the security of our forces but also will provide guidance for combat operations if war is forced upon us. Finally, air intelligence must be carefully coordinated through proper control.

CONCEPT NUMBER ONE. *Intelligence agencies are never more at war than in periods of nominal peace.* The logical outgrowth of this concept is, of course, the fact that the success of the initial phases of war (and in this thermonuclear age these probably will also constitute the decisive phases) will depend on the quality of intelligence produced in peace. Most people can understand and pay lip service, at least, to the latter idea, but they balk completely at a rational consideration of the first one when it comes to providing tangible support needed by the intelligence structure. I have never, in peacetime, seen an intelligence staff at any echelon that was not undermanned, overworked, and restricted in its operations by a lack of real appreciation on the part of the command for the goals the intelligence section had set for itself to accomplish in the light of the command mission.

At all echelons intelligence staffs must have adequate numbers of the best qualified personnel, maximum equipment, facilities, and funds; maximum freedom of action; and coequal status with other major staff elements. It can be categorically stated that if the air force intelligence structure had all the support it could profitably employ — and fully justify — in peacetime, its resources would be ample for any type of war we might become involved in.

Let us now analyse each of the requirements (personnel, material support, freedom of action, and coequal status) in terms of what other writers have had to say, bearing in mind these three basic intelligence missions: to provide timely warning of the imminence of hostilities (whether on a total or limited war

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basis); to provide detailed knowledge of the capabilities and vulnerabilities of potential enemy nations and of friendly and neutral nations; and to provide the best possible intelligence as to the intentions of foreign nations, particularly those that are our potential enemies.

PERSONNEL. During wartime, all the services drew heavily on civilian professions for manning intelligence posts. Lawyers, insurance adjusters, investigators, police enforcement officers, scientific and technical personnel, and teachers were put into uniform; and, by and large, these people carried the intelligence workload of the services. By and large, too, their contributions compared favorably with those of professional military people. There have been numerous attempts made to identify the qualifications for intelligence personnel. Farago¹ lists ten major groups of traits which "the good spy is supposed to possess" in order to qualify for that particular aspect of intelligence work. For the most part, these same traits could be used as a starting basis for selection of personnel for other intelligence tasks.

First of all, his morale must be high and he must be genuinely interested in the job ahead.

Second, he must be energetic, zealous, and enterprising.

Third, he must be resourceful, a quick and practical thinker. He must have good judgment and know how to deal with things, people, and ideas. He must be proficient in some occupational skill.

Fourth, he must be emotionally stable, capable of great endurance under stress. He must be calm and quiet, tolerant and healthy.

Fifth, he must have the ability to get along with other people, to work as a member of a team, to understand the foibles of others while being reasonably free of the same foibles himself.

Sixth, he must know how to inspire collaboration, to organize, administer and lead others. He must be willing to accept responsibility.

¹Farago, Ladislav, *War of Wits* (NY, Funk & Wagnalls Co., 1954), p. 187.

Seventh, he must be discreet, have a passion for anonymity and know how to keep his mouth shut and preserve a secret.

Eighth, he must be able to bluff and mislead, but only when bluffing and misleading become necessary.

Ninth, he must be agile, rugged, and daring.

Tenth, he must have the ability to observe everything, to memorize details accurately. He must be able to report on his observations lucidly, to evaluate his observations and relate them to the greater complex of things.

MATERIAL SUPPORT. I should like to stress the importance of allocating the maximum in equipment, facilities, and funds to intelligence work in time of peace with a quotation from Sun Tzu,² the Chinese military oracle, whose writings on the art of war in 500 B. C. have influenced military thinking down to this day.

Hostile armies may face each other for years, striving for victory which is decided in a single day. This being so, to remain in ignorance of the enemy's condition simply because one grudges the outlay of a hundred ounces of silver in honors and emoluments is the height of inhumanity.

One who acts thus is no leader of men, no present help to his sovereign, no master of victory.

Thus, what enables the wise sovereign and the good general to strike and conquer, and achieve things beyond the reach of ordinary men, is foreknowledge.

In speaking of the cost of the British secret service as a whole (both positive and counterintelligence), Seth noted:³

In 1913 the Secret Services cost 46,000 pounds; in 1939, 500,000 pounds; during the recent war 52,000,000 pounds annually; and in 1953, 5,000,000 pounds. . . . It is worth many times this amount, for though the American, French and Russian (secret) services

² Sun Tzu Wu, *The Art of War* (Translation by Lionel Giles, Introduction and notes by B/G Thomas R. Phillips, Harrisburg, Pa., The Military Service Publishing Co., 1944).

³ Ronald Seth, *Spies at Work*, London: Peter Own Limited MCMLIV, p. 202.

are now more extensive than at any time in this century, British secret service still maintains its lead in performance and results.

Farago gives a somewhat different order of magnitude for British expenditures for intelligence. He said that the 1954 budget was three million pounds and that this amount was the highest in the entire history of the British Secret Service. He pointed out, however, that this figure is deceptive because it represents only allotments from public funds and he adds: "The bulk of Britain's intelligence revenue comes from private funds, such as dividends of the Anglo-Iranian Oil Company, some of whose shares are held by the Admiralty."⁴

Farago then gave an indication of what US military services are spending for intelligence. In fiscal year 1955, the Army asked for \$54,454,000 for intelligence, and for fiscal years 1952-54, inclusive, the Army spent a total of \$176,400,000 on intelligence. Yet this represented less than one-half of one percent of the total Army budget.⁵ Then, stressing his thesis that the cold war is a "War of Wits," Farago pointed out relative expenditures for intelligence in the Continental Army and in the services today:⁶

Between 1776 and 1781, George Washington spent approximately eleven percent of his entire military budget on intelligence operations. The fact that today we spend less than one percent of our peacetime military budget on these same activities shows how little effort is being made to solve the "friction" by intellectual means rather than brute force.

From the contacts I have had with various British intelligence officers, visits to JIB (Joint Intelligence Bureau) and some of the intelligence officers of the Air ministry, and from comparing the results of British intelligence with those of USAF intelligence, I am certainly inclined to agree, at least partially, with Seth's last statement for the quality of British intelligence production is invariably very high, and the quantity compares favorably with that produced by the much larger USAF intelligence staffs. The British traditionally have been willing to

⁴ Farago, *op. cit.*, p. 50.

⁵ *Ibid.*, p. 51.

⁶ *Ibid.*, p. 345.

spend a great amount of money, time, and effort in the collection of intelligence information, more, perhaps, than most modern nations. They have not, in other words, weighed results obtained by intelligence efforts on a completely pragmatic basis, as we "practical Americans" are inclined to do; they know that one cannot package intelligence results on a "pound-for-pound" basis. So for the past two hundred years they have been preeminent in the field. This is not to say that they have not made serious mistakes; but, by and large, their intelligence estimates have been remarkably sound. Moreover, they have used periods of nominal peace to extend and consolidate their intelligence activities, not only for the purpose of preparing for the next war but also (what is even more important) preparing for the peace to follow.

FREEDOM OF ACTION. As background for a discussion of the need for granting maximum freedom of action to air force intelligence, I should like to quote the following passage from the Report of the Task Force on Intelligence Activities:⁷

Effect of Diplomacy on the Over-All Collection of Intelligence.

The task force has recognized the incompatibility in method between the practice of diplomacy and the more direct and active operations incident to the collection of intelligence and the conduct of cold war. While all contribute to the end in view, conflicts between them must be resolved, usually on a high level, and always in the national interest. It must be realized that diplomacy is not an end in itself; that while political ends must be served and unjustifiable risks avoided, the collection of intelligence is a vital element in the fight to preserve our national welfare and existence. Instances have come to the attention of the task force where too conservative an attitude has prevailed, often to the detriment of vigorous and timely action in the field.

Although the foregoing comment was made in connection with a discussion of the intelligence activities of the Depart-

⁷ *Intelligence Activities, A Report to the Congress*, by the Commission on Organization of the Executive Branch of the Government, June 1955, pp. 42-43. (Hereafter referred to as "Task Force Report.")

ment of State, it is every bit as applicable to air intelligence as to the Department of State because the air attaché system, which is a major contributor of intelligence information, functions as an integral part of the State Department's Foreign Service.

It is altogether appropriate that, generally speaking, diplomatic considerations take precedence over the collection requirements of the attachés. Nevertheless, within the framework of that principle (which is a part of the principle of civilian control over the military establishment), it should be obvious from the implications of the Task Force findings that a less conservative attitude toward opportunities for collection of intelligence information should permeate not only the diplomatic service but also the military establishment.

I shall not devote much attention to detailed suggestions for carrying out intelligence operations. My concern is with the promotion of principles that would provide the type of climate in which competent people, using their innate intelligence and ingenuity, can devise an infinite number of ways in which to collect and produce air intelligence — ways which must, of course, be within the framework of US national objectives at all times. Nevertheless, I feel very strongly that we should take a page out of the British Secret Service book and put our intelligence collection efforts on a basis where they can pay their own way, at least in part. This would be a long-term proposition and it would be impossible of achievement under the existing regimentation that governs all business enterprises in which the government is officially engaged.

COEQUAL STATUS WITH OTHER MAJOR STAFF ELEMENTS. There is, as far as I can discern, no rhyme nor reason in subordinating intelligence as a staff section to operations. My biggest objection to the subordination of intelligence to operations lies in the fact that the operations officer is automatically placed in the position where he frequently makes purely command decisions. The intelligence officer is supposed to advise the commanding officer as to what the enemy can and probably will attempt to do that would interfere with the accomplishment of the command mission. The operations officer is supposed to advise the commanding officer as to what his own forces can and should do. The commanding officer is then in a position to weigh both his own and the enemy's

capabilities and to make a sound command decision as to command action. It is totally wrong for the operations officer to make such a decision, for the commanding officer is thereby deprived of the full value (and probably full information) of enemy capabilities, vulnerabilities, and intentions. Zacharias, commenting on the fallacy of subordinating, told the Congressional Committee investigating the Pearl Harbor disaster that one of the organizational deficiencies which was a contributing factor was: ⁸

That the planning officers were allowed to take over the Intelligence function of evaluation. This resulted in individuals without a full knowledge of the Japanese or their psychology determining what the Japanese might do. This practice applied not only in Washington, but also at Pearl Harbor, where the erroneous conclusion was reached by the planning officer that there was no chance of an air attack on Pearl Harbor.

CONCEPT NUMBER TWO. *Success achieved by intelligence in peace will determine the outcome of the war.*

General Kuter stated: ⁹

In jet-atomic warfare there will be no room for gross errors of judgment. There will be no time, should hostilities start, to correct mistakes in the types of forces that we have provided, the manner in which they have been organized and trained, or the way we fight. And the terrible penalty for failure could be quick and complete defeat.

Many factors are involved in any satisfactory answer. But one thing is sure. The question cannot be answered satisfactorily unless we have the proper doctrine, and unless the doctrine is accepted.

For years the US has believed that its greatest military potential lay in its industrial might. The validity of this belief was demonstrated in World Wars I and II and again in Korea. We can be sure that any Soviet attacks against this country will be planned to destroy not only our retaliatory force but also our industrial potential. Thus we can see that "no longer

⁸ Zacharias, p. 253.

⁹ Kuter, Lawrence S., Lt. Gen., "No Room For Error," *Air Force Magazine* (AWC Curriculum Handout #36-4-a, 24 November 1955).

will the US or any other country be able to build up its military forces and rely on its industrial potential after the war has begun.”¹⁰

Intelligence must be developed before war breaks out if it is to influence our preparations, provide a foundation for our planning, and guide early phases of operations. It is true that Mr. Allen Dulles, present Director of the CIA,¹¹ achieved unprecedented success in the history of espionage with the intelligence network he established in Germany, operating from Switzerland, during the war.

. . . Through this network Mr. Dulles managed to start a conspiracy within the high command of the German armies in the south and to bring about the surrender of the very army on which Hitler was dependent for the prolonging of the war from behind the legendary “Alpine redoubt.”

However, the situation in Japan was a far different matter. Through shortsightedness and perhaps ineptitude and inexperience, the US had failed to establish the groundwork for an effective espionage system in Japan, notwithstanding the fact that Zacharias and other authorities on Japan had been aware of the need and had advocated such prior planning. In view of the steadily deteriorating relations that existed between Japan and the US right up to the surprise attack against Pearl Harbor, this failure to develop, in advance of war, a workable system for systematic collection (in Japan) of intelligence information during the war that most intelligence personnel were sure was virtually inevitable is an extremely black mark against the US intelligence agencies of that time. Moreover, this country made no serious effort to establish an intelligence net within Japan during the war because it was felt that the effort was far too great in relation to its possible value. Farago pointed out that it is a virtual impossibility “. . . to set up a local network in an enemy country under wartime conditions. . . .”¹² [Allen Dulles’ success notwithstanding]

¹⁰ Thomas K. Finletter, *Power and Policy*, New York: Harcourt, Brace and Co., p. 256.

¹¹ Farago, *op. cit.*, p. 183.

¹² *Ibid.*, p. 182.

How can we account for the fact that, against all reasonable odds, the US did establish a satisfactory espionage net in Germany after war started but failed to do so in Japan, its other major enemy? I suggest that the reason lies, among other factors, in the accessibility of Germany before the outbreak of war. In other words, more Americans and individuals from Allied nations had contacts before the war in Germany than in Japan. Interestingly enough, the Soviets failed to re-establish within Germany an adequate espionage net:

. . . when their original network, known as the *Rote Kapelle* or *Red Orchestra*, was smashed. They managed to create such networks only in countries of their wartime allies, Canada, the United Kingdom, and the United States, and in neutral Switzerland, traditional battleground of international espionage.¹³

The Soviets did achieve remarkable success in Japan (remember the Sorge espionage case?)¹⁴ It seems to me that there is a direct correlation between the accessibility of a potential enemy country just before the outbreak of hostilities and the probability of being able to establish (or re-establish) and maintain an espionage net in that country after war breaks out. What does this mean, as far as the US is concerned at the present time? If it is difficult to penetrate the Iron Curtain today, it will be even harder when war breaks out. Therefore, we must go all-out to penetrate it, and to establish many strong, diversified, and versatile nets as soon as possible. We cannot do this under the existing limitations of personnel, equipment, and funds. Yet maximum reliance must be placed on the ability of intelligence to decide by whom, when, where, and in what strength the US may be attacked. The responsibility of the Directorate of Intelligence (ACS/I, since 1 July 1957), USAF, is to develop this information regarding our susceptibility to air attack — this in an air-nuclear age.

CONCEPT NUMBER THREE. *Air intelligence must, on a continuing basis, encompass all aspects of power in foreign nations (political, economic, and psychosocial, as well as military), both in the present and in the historical perspective. Moreover, it must speak out on matters of national strategy.*

¹³ *Ibid.*, p. 182.

¹⁴ *Ibid.*, pp. 163, 166, 179, 181, 212, 219-220.

Heretofore, air intelligence (as well as army and navy intelligence) has confined itself primarily to an evaluation of the military power of foreign nations. The National Security Council has directed the air force to interest itself primarily in intelligence of foreign air forces and has assigned responsibility for covering other aspects of national power to the other US intelligence agencies.

It has long been an American tradition that the military establishment should remain free from the "taint of politics." As a result, the military has shied away from any contact with political problems. This even reached the point before World War II where few of the regular military establishment exercised their constitutional right to vote in elections.

This fear of military domination in our national life stems, of course, from our inherited distrust of all forms of tyranny and autocracy. Before the time that military power became inextricably tied to the other forms of national power, perhaps even as late as the First World War, this attitude may have had some validity in our national consciousness. However, Clausewitz would not have subscribed to the complete separation of military thinking from the remainder of national life and activities. He pointed out that war is merely an extension of national, political policy by other means.¹⁵ Hitler demonstrated his conviction that war is merely a "mopping-up process" by capitalizing on the gains made by his fifth column. Certainly the Marxists have from the beginning showed the world by word and deed that the line of demarcation between politics and military action is extremely nebulous.

It can and probably will be argued that air intelligence should "stick to its knitting" and concentrate on ascertaining the strengths and weaknesses of foreign air forces in the traditional fashion (in which the army is supposed to develop intelligence on foreign ground forces; the navy, on foreign naval forces; the air force, on foreign air forces; and the State Department and CIA, on foreign political and economic strengths and weaknesses). However, as it is air power that will have to carry the brunt of any initial contacts with the enemy, as well as continuously to seek out and destroy all aspects of the enemy

¹⁵ Karl von Clausewitz, General, *On War* (Translation by O. J. Mattijs Jolles), Washington, D. C.: Infantry Journal Press, 1950, p. 16.

warmaking potential and will to fight, air intelligence must have the capability of advising the Chief of Staff, USAF, where and when to hit the enemy in order to hurt him most.

It seems incontrovertible to me that we have reached a place in history where the military establishment, particularly the air force, must concern itself with political problems (as well as the economic and psychosocial problems) — the traditional American feeling in the matter notwithstanding. General Samford, Director of Intelligence, Headquarters USAF, agreed on this point, in response to a question asked by the writer, following his lecture to the Air War College. He stated, in effect, "There is a growing community of thought that the military establishment should get into the fields of political and economic warfare, as well as psychological warfare."¹⁶ Air intelligence, obviously, must be in the vanguard of this new approach.

CONCEPT NUMBER FOUR. *Intelligence must take a dynamic approach.* In speaking of the fact that data on the Soviet Bloc are inadequate, the Task Force Report on Intelligence Activities considered that security measures adopted by the Communists have been exceptionally effective, particularly in comparison with American security measures, which make it relatively simple for foreign nations to collect vital secrets. The task force admonishes, however:

. . . The information we need, particularly for our Armed Forces, is potentially available. Through concentration on the prime target we must exert every conceivable and practicable effort to get it. Success in this field depends on greater boldness at the policy level, a willingness to accept certain calculated political and diplomatic risks, and full use of technological capabilities.¹⁷

Opportunities to increase air intelligence coverage of Soviet capabilities and intentions include:

a. The increasing of our clandestine operations and efforts to infiltrate the iron and bamboo curtains from all peripheral countries, taking maximum advantage not only of border-

¹⁶ Samford, John A., Major General, "Objectives for the Use of Force," lecture to Army War College, 2 January 1956.

¹⁷ Task Force Report, *op. cit.*, p. 69.

crossing techniques on land and by air drop but also neutral shipping and US submarines, particularly in the Arctic Ocean and the Black Sea coastal areas.

b. The establishment of contacts with and provision of support to (in return for services rendered) agents from among known governments in exile, such as those from the Baltic and East European Satellite nations; the known 10,000,000 Chinese living outside China, as minority groups throughout Asia; all known religious organizations, business firms, and governmental agencies throughout the Free World having dealings with the Soviet Bloc; all known visitors to Soviet-dominated territory, such as trade union officials, scientists, airline and shipping crewmen, and others; and all defectors from iron curtain countries.

c. The attempt to bribe, intimidate, subvert, or otherwise cause Soviet and Satellite diplomats, government officials, technicians, or visitors abroad to "double" for us upon their return — or to defect and remain in the West.

d. The making of surreptitious photographic penetration flights with high capability aircraft at irregular intervals, to cover peripheral areas.

e. The purchase of controlling interest in the most active Western firms having dealings with the Soviet or Satellite nations in order to use these firms to collect intelligence information, spread favorable propaganda, subvert Soviet and Satellite nationals, and otherwise create situations behind the iron and bamboo curtains that would be favorable to the West.

f. The employment of such outstanding historians as Alfred J. Toynbee; political scientists, as Professor William M. McGovern and Dr. Robert Strausz-Hupe; geographers, as G. Donald Hudson; ethnologists, as Margaret Meade; and authorities on Russia and Communism as Dr. Marc Szeftel and Mr. James Burnham. The individuals named represent only a few of the potential list of qualified consultants; the profound and detailed knowledge of foreign peoples and areas in their respective professions that is possessed by people of this stature would furnish a wellspring of ideas of inestimable value to air intelligence. In addition to enriching the staff with people of this caliber we should hire outstanding representatives in the advertising and public relations fields (preferably those having experience in foreign areas), who can assist the factual experts

in packaging the ideas we want to use in our "War of Wits" with the Soviets, this struggle for the minds of men.

CONCEPT NUMBER FIVE. *Intelligence should be used as an offensive weapon, one capable of influencing the outcome of either the cold war or any hot war, peripheral as well as total.* Although there are no apparent indications that the Soviet Union, during the next few years, intends to take action of the sort that would surely precipitate another world conflict, we must be always on the alert to the possibility that such a conflict might arise through miscalculation on their part. The dangers are greatest in the peripheral areas, where Satellite peoples might get out of hand and take action "from which we cannot retreat without disaster; then the chances of keeping war limited are very remote."¹⁸

The difficulty is not in the lack of desire to exercise such restraint, but in the fact that the things we stand to lose are of such great value that there is no chance of limiting phases of conflict. To have mutual understanding and agreement between enemies is essential if conflict is to be localized. What does this mean to air intelligence? Simply this: we must produce intelligence on every facet of enemy life. To do this, air intelligence should control or at least coordinate all air force agencies that to any degree operate in enemy territory or attack behind enemy lines or perform other than strictly military operations in areas that may become the scene of battle or in areas where, in the cold war, the air forces encounter Communist influences.

CONCEPT NUMBER SIX. *Intelligence must be used systematically.* Commanders, policymakers, planners, and operations personnel at all echelons must rely upon, then plan, then act not only upon intelligence but also upon intelligence recommendations — within practical limits of our own capability and feasibility of such recommendations. We have long expressed as a principle of intelligence the concept that it must be supplied to the interested command in time to be of use. Unfortunately, in intelligence circles there has not been, it seems to me, equal emphasis placed upon submission of intelligence to the commander and his staff in such a form and so convincingly expressed that it will receive the prompt attention

¹⁸ *Ibid.*

and responsive command action that it warrants. Stressing the need for reducing the margin of error inherent in any human undertaking, General White pointed out the need for educating our planners and our leaders. He said that poor command decisions and inferior or unimaginative staff work would nullify the tremendous effort that has gone into developing an extremely expensive air force. He added:

. . . Superior employment of air weapons must be based on complete understanding of the nature of air warfare, the political and military context within which the air forces are operating, and a sound but imaginative understanding of targets and weapons.¹⁹

There also has been entirely too little emphasis on the concept that command plans and action should be based on intelligence. This has not always been the fault of intelligence. Nevertheless, too often in the air force, particularly, operational plans have been prepared with absolutely no regard for the intelligence estimate of enemy capabilities and intentions that these selfsame plans were designed to counter. In my experience as a staff officer at various echelons of command, there have been few instances in which command war plans, emergency plans, or operations plans have actually been geared to the intelligence that gave rise to the necessity for such plans. More often than not, the intelligence annex is merely prepared at the same time as the basic plan and the other annexes and all are stapled together at one time. The proper procedure, and the one that we in intelligence at USAFE (US Air Forces in Europe) were finally able to sell to the planners, should be this. The intelligence estimate of the situation is prepared first and given to the commander and to all his staff agencies in advance of the planning cycle. The basic plan and all the annexes (including the intelligence annex) are then prepared simultaneously, with a view to countering the threat indicated in the intelligence estimate.

I believe this failure to take the intelligence estimate into consideration at every stage in the planning cycle in the military establishment stems by and large from an American pre-

¹⁹ White, Thomas D., "The Current Concept of American Military Strength," AU Quarterly Review, Vol. VII, Spring 1954 (AWC Curriculum Handout #56-2-B, 22 November 1955).

dilection for ignoring in the policymaking cycle available intelligence regarding the capabilities and intentions of actual or potential enemies.

It seems to me that the intelligence family must find some way not only to improve the quality of its product but also to stimulate an acceptance of that product and a willingness to act upon it. The process of making positive recommendations by intelligence for command action would, I believe, materially improve this situation and would lead to a command acceptance of a principle advanced by General Ridgway, when he was Chief of Staff of the US Army. He stressed the fact that the present world situation makes it more important than ever to have complete information upon which to base economical deployment and effective employment of army forces, as well as to avoid surprise (obviously the same principle applies to all military forces). General Ridgway stated: "Adequate intelligence constitutes the fundamental basis for the calculation of risks, the formulation of plans, the development of materiel, the allocations of resources, and the conduct of operation."²⁰

CONCEPT NUMBER SEVEN. *Intelligence must continuously estimate enemy intentions as well as capabilities and vulnerabilities.* One of the biggest reasons that commanders at times have made their own estimates, rather than accept those of their intelligence officers, is simply that the intelligence officers have been unwilling to "go out on a limb" and estimate enemy intentions. Before the early 1930's the "method of intentions" was used by the US Army. It was a method used by the elder von Moltke. Shortly before 1936 the American Army adopted the "method of capabilities," which had been the method used by Napoleon.²¹

Admittedly the "method of intentions" is a difficult one and, for the inexperienced intelligence officer, nonhabit forming because the probability of error is extremely high. Success for this method depends not only on an intimate knowledge of the mentality of the opposing commanders as well as the tactical doctrine of the enemy but also upon such intangible things as the physical and mental condition of the opponent, his normal reactions, and reasoning processes. On the other hand, the

²⁰ Farago, *op. cit.*, p. 8.

²¹ Command and General Staff School, "Military Intelligence," p. 7.

"method of capabilities" takes into consideration all lines of action open to the enemy. It does not discard any possible line until the enemy's dispositions are such that, even though he desired to adopt that line, he is physically incapable of doing so. Thus it strives by elimination to reduce the possibility down to one — the only one line of action which the enemy can take. This is the ideal, as far as intelligence is concerned, but it is seldom reached.

CONCEPT NUMBER EIGHT. *Intelligence is no longer a function of command, except at the higher echelons.* All of the services (particularly the air force) have traditionally paid only lip service to the principle that intelligence is a function of command. This has been amply demonstrated by a lack of provision for suitable intelligence staffing between World War I and World War II and by a demeaning of intelligence functions. My reasons for believing that intelligence should no longer be considered a function of command at all echelons are different from either of these.

In the first place if an all-out global war should occur, the US intelligence operations should be centrally controlled. Second, the entire intelligence process cannot reasonably be carried out at all echelons; therefore, even in a prolonged period of cold war, air intelligence operations must be, if not actually centrally controlled from Washington, at least concentrated in a small number of locations where the complete intelligence process is directed by one individual. Unquestionably, in the past, commanders of squadrons, groups, wings, even air divisions and air forces occasionally may have felt a twinge of conscience because they have been unable to see their way clear to carry out all the intelligence functions that manuals said they should, from collection through dissemination. These individuals may now draw a sigh of relief, as I view it; for in the air force, their primary intelligence function is to disseminate down to the troops air intelligence that has been received from higher echelons.

It may be argued that I am hereby cutting the rug out from under the principle I previously expressed — that the intelligence officer should not be subordinated to other staff officers but should report directly to the commanding officer. On the contrary, in these lower units, and even when his recognized

duties are in accord with his actual duties, I still feel that the intelligence officer at every echelon of command should remain responsible only to the commanding officer or the chief of staff, and not to any other staff officer! He must maintain this independence of other staff considerations in order best to present to his commander the most complete intelligence picture and the most reasonable intelligence recommendations, even though he himself may not have developed either the intelligence estimate of the situation or the recommendations based on it.

At the major air force command levels there is no question in regard to major staff level standing for the intelligence officer as intelligence should continue to be for his commander a complete function of command, in the traditional sense. At the lower echelons, intelligence would still be a command responsibility, but rather more in the "special staff" tradition than the "general staff" concept.

CONCEPT NUMBER NINE. *Major headquarters staffs should get out of the operational aspects of intelligence to the maximum extent possible and should confine their attention largely to policymaking and flash or spot estimating functions.* This concept is closely related to some of the thinking indicated in the discussion of the preceding concept. Compared with the present tables of distribution, the intelligence staff of Headquarters USAF and the major subordinate commands would be relatively small. These staffs, however, would be comprised of highly qualified personnel, representing the maximum intelligence capability in the air force. Their functions would be primarily policymaking, inspection, liaison, and estimating. They would be prepared to give flash estimates of indications of the imminence of hostilities and spot estimates, as required by the commander and his staff. They would exercise staff supervision not only over the intelligence activities of all subordinate units of the command, but also over the collection and production activities of the intelligence centers belonging to the command; these centers would perform the operational aspects of the intelligence process for the entire command.

CONCEPT NUMBER TEN. *Air Intelligence (to include counterintelligence) must keep under continuous review and, to the maximum extent possible, must downgrade and publish its files concerning enemy capabilities, activities, and intentions.*

What I am proposing is nothing less than declassifying certain carefully selected items of intelligence and counterintelligence regarding Soviet activities and providing such information to the American public on a planned basis. Let the American people get this information, but from authoritative sources and not from newspaper columnists.

Probably the most violent opposition to this proposal will come from some of my fellow intelligence officers, because traditionally, intelligence has had a moral responsibility to protect its sources, and rightly so. Nevertheless, intelligence files are bulging with information that represents such a conglomeration from so many sources that no one source could possibly be harmed by its disclosure. Let us substitute this type of information for at least some of the detailed data on our own military establishment that we now hand out so freely. I am confident that the public reaction to this policy would, in general, be very favorable, and that in the long run, the story of air power and the capabilities of the air force to safeguard the security interests of the US can be made synonymous in the minds of the American people.

So let's stop giving aid and comfort to our potential enemies and start a program designed to discomfort them on a global scale — by informing and arousing the American public and the rest of the free world with factual knowledge of Soviet activities and intentions. For example, an article in the September 1955 Reader's Digest discussed the disturbing story of the manner in which the Communists, who had infiltrated the military services and governmental structure of Iran, were prevented from taking over the entire country by the merest accident. As a result of the investigation, it was disclosed that five hundred Iranian officers were implicated in the plot, including numerous high-ranking individuals in both the Army and the police departments.²²

This story, terrifying in its implication for other countries, would, I submit, have had a much stronger impact on public awareness of the Communist threat to the world today had it been officially released by a government intelligence agency, rather than by a commercial writer. This is the type of run-

²² Joseph A. Mazandi and Edwin Muller, "The Hunch That Saved Iran," Reader's Digest, September 1955, pp. 59-60.

of-the-mill basic intelligence available to the services which should be released to the public as soon and as fully as is practicable and, in any event, before some sharp news reporter can capitalize it.

CONCEPT ELEVEN. *All air intelligence concepts must be considered dynamic, kept under constant review, and revised to meet changing world situations.* It follows that air intelligence philosophy must be considered in its broadest sense as a constant search for principles. The doctrine and policies resulting from this process must be changed as new concepts are developed.

In this context, General Kuter provides another valid concept for developing an air intelligence policy, although he was applying it in the larger sense to the whole spectrum of air force thinking. "A true air doctrine accepted and exploited is the key to a sound military policy. We have the doctrine, now we must exploit it in a common strategy."²⁸ We don't, as yet, have an air intelligence policy or doctrine in writing, but if USAF will adopt that last admonition of General Kuter's as the basic air force intelligence policy, it will be only a matter of time until we have an air intelligence doctrine — one on which the commands may then soundly base their own intelligence policies.

²⁸ Kuter, *op. cit.*, p. 29.

DEVELOPMENTS IN AIR TARGETING

I. THE MILITARY RESOURCES MODEL

Robert W. Leavitt

The basic objective for air targeting is to present measurements of the ability of the enemy to take actions which threaten our national security. These measurements must be presented in such a way as to guide our action against the enemy's strengths. This objective is usually broken down into subobjectives which illustrate clearly its breadth and complexity. Expressed in terms of courses of enemy action which are unacceptable to the US, these subobjectives are, in descending order of importance:

1. To deliver atomic weapons against the US, our forces abroad, and our allies.
2. To resist the penetration of his airspace by our air forces.
3. To develop and produce potentially decisive weapons or weapons systems.
4. To conduct large-scale land and naval operations against our forces and our allies.
5. To develop and maintain the economic, political, and psychological strengths necessary to support prolonged military operations.

With the development of new weapons and weapons systems, however, and the resultant capability of a single aircraft or missile to deliver the equivalent of millions of tons of TNT on one mission, the analysis and presentation of the strengths supporting the first three subobjectives have assumed ever-increasing importance and urgency. This compression of fire-power in time brings the realization that the decision in future wars may be reached in a matter of hours or days at most. Old problems have been accentuated and many new ones created by these developments. For example, selection of target systems to achieve the subobjectives time-phased in the order shown above is no longer sufficient. Analysis must produce not only a priority of targets within each subobjective and target system, but also an indication of how many of them

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must be attacked to achieve the objective. Thus analysis by increments in time and space is becoming an essential element in the targeting process.

The complexity of these problems and the speed with which they must be solved have led to the introduction of new statistical methods and of new machine computing techniques into the targeting analysis process. For example, immediate assessment of the damage and contamination effect of a given attack will be necessary in order to determine the destruction required of succeeding attacks. This involves a continuing evaluation of target priorities and of net offensive strengths throughout an air offensive until a decision is reached. Two-sided war-gaming offers the best possibility for providing the answers needed for this and similar problems. Because of the time element and the great volume of data required by the new statistical techniques, high-speed electronic computing is essential. By this process hypothetical but highly probable military situations in both peace and war can be examined and tested for the types of detailed targeting information needed by the analyst to guide and evaluate target selections. Only in this way can the total targeting effort truly be said to present measurements of the enemy's strengths in such a way as to facilitate action against them.

During the last several years it has become increasingly apparent that mathematical "Monte Carlo" and "input-output" type models offer a new and promising technique for "war-gaming" and for analyzing a nation's economic and military resources for targeting purposes. The rapid advances in the speed and data handling capacity of modern electronic computers have now made these models feasible for application to many air targets problems.

The purpose of the mathematical models is the selection of targets for optimum forestalling of enemy courses of action. This requires the models to answer the following questions in order.

1. *Present situation*

- a. What is the size and composition of the enemy military establishment (military resources)?
- b. What is the size, composition, and productive ability of the enemy economy (economic resources)?

c. What levels of military action will these resources support?

2. *Mobilization capability*

a. What would be the size and composition of enemy military resources and economic resources after an all-out mobilization period of x months?

b. What levels of military action would these resources support?

3. *Evaluation of damage*

a. For any specified bombing attack what would be the yield and location of all exploding weapons?

b. Given these explosions what would be the size and composition of the post attack military and economic resources (including population)?

c. Given the post attack resources what level of enemy military action could be maintained?

4. *Recuperation*

What would be the size and composition of enemy military and economic resources y months (or days) after the specified attack, taking into account repair, rebuilding, conversion of other facilities, and new construction?

For "war-gaming," that is, estimating net offensive capabilities, the above questions must be asked about our own country as well as about the enemy country.

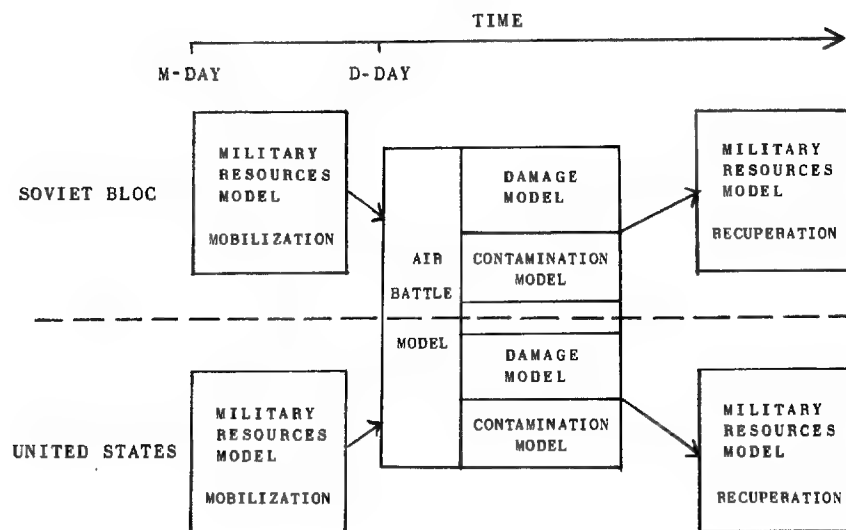
The system of mathematical models which would answer these questions is shown schematically in Figure 1.

The air battle, the damage, and the contamination models would answer questions 3a and b above. Discussions of these models are planned in subsequent issues.

The remaining questions concerning the present, post mobilization, post attack, and post recuperation capabilities of the military and the economy are the province of the military resources model, which includes economic resources.

Procedurally, the military resources models determine the number and size of missions, both offensive and defensive of various types, which each country can carry out in a given span of time. This information is fed to the air battle model which together with the damage and contamination models deter-

FAMILY OF INITIAL MATHEMATICAL MODELS FOR
AIR TARGETS ANALYSES



mines the military, economic, and population resources remaining in each country after a period of air battle. The damage information is in turn fed back to the military resources model which determines the number, type, and size of missions which each country can carry out *after the first phase of air battle*. The process is then repeated for later phases of the air battle.

If the models can, as is believed possible, answer the questions posed we have an exceedingly powerful tool not only for target selection, but also for estimating the capability of a country to carry out military action now and in the future under various conditions and assumptions. The testing of alternative target systems in the first and succeeding phases can lead to the choice of the optimum target system for any of several different strategic situations.

When then, is the military resources model and how is it designed to answer the questions put to it?

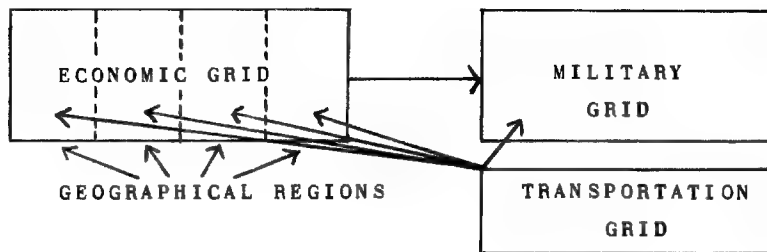
The military resources model is an input-output model. This is a kind of mathematical model about which it has been said, it is much easier to understand what it is expected to do than how it does it. What the military resources model is expected to do is to estimate the capabilities of a military establishment and its supporting economy to carry out military action. The essential problem of making this estimate is that everything must be considered simultaneously.

It is not enough to know that the capacity of the aeroengine industry is so many engines per month. One must also know whether there is enough steel (or electric power, copper, petroleum, ball bearings, and so on) to produce these engines while at the same time the tank, gun, shipbuilding, ammunition, and many other key industries (including reconstruction in a post attack period) are also requiring steel. Furthermore, not only the direct demand for steel must be considered. The aeroengine industry consumes not only steel but also aluminum, electric power, transportation, and many other inputs, the production of which also requires some steel. In short, to know the capabilities of one industry we must account for requirements of all industries for a vast range of raw materials, labor, capital equipment, components, goods in process, transportation, and communications. Input-output models are a technique for doing just this. An input-output model shows for

each industry (or military activity) the requirements for supplies from each other industry.¹

The military resources model consists of three sub-models or grids; the military grid, the economic grid, and the transportation grid. The economic grid is in turn broken down into geographical regions which are related to each other by the transportation grid. The military resources model can be illustrated schematically.

THE MILITARY RESOURCES MODEL



Each of these grids consists of an inventory of resources and a table of coefficients in the form of inputs required per unit of output. For the economic grid the inventory of resources is the capacities of all producing industries. The table of coefficients shows material, labor, and capital inputs per unit of industrial output; for example, kilowatt hours of electricity per ton of aluminum and tons of aluminum per heavy bomber aircraft. The military grid shows labor, equipment, and supplies required per unit of military activity; for example, tons of fuel per flying hour, number of aircraft per wing, tons of ammunition (by type) per division month, and so on. Its inventory of resources is the number of military units of each kind and their associated equipment. The transportation grid has as its output units of transportation capacity on a regional basis. This grid acts as a restraint on both the economic grid and the military grid as transportation can be a bottleneck or restraint both in the economy and within the military structure itself.

¹ See *Studies in Intelligence*, Vol. 1, No. 4, "The Role of Interindustry Studies in Economic Intelligence," Robert Loring Allen, p. 97.

Without knowing the full complexity of the statistical and computational procedures (which is awe-inspiring) the reader can now visualize the operation of these grids in answering our initial questions. The military grid shows for a given set of military forces the level of combat actions that could be maintained if the economy provides all the supplies the military requires. The coefficients of the military grid determine the requirements of the given level of combat actions from the economy. The economic and transportation grids determine how much of these supplies can be forthcoming from the existing inventory of economic resources.

At the present time the economic grid of the Soviet Bloc has been largely completed. It has been constructed in two parts — one covering the USSR and European Satellites and the other the Peoples Republic of China. For the European Bloc the grid distinguishes 240 producing industries or sectors and their materials, components, capital equipment, and labor inputs. Five test runs have been made and evaluated.² On the basis of the evaluation of these test runs, application of this grid to certain types of live air targets problems is now being undertaken. However, a substantial data improvement research program is going concurrently.

The military grid has been under development for about nine months. It is expected that test runs of this grid will be made in the summer of 1958.

The transportation grid has been under development for about six months, and it is expected that test runs of this grid will be made in the summer of 1958. The construction of this grid is being undertaken on two fronts. The first involves the geographic disaggregation of the economic grids in terms of local regions. The second consists of the development of a transportation grid based on these regions. To date, 159 regions covering the USSR have been designated, outlined, and coded. The transportation net has been divided according to these regions and the terminals and links within each region coded and catalogued. The 159 regions correspond to Soviet oblasts wherever possible in order to take advantage of the data

² Distribution of these runs has been made throughout the intelligence community. A few copies are still available for interested readers.

on production and transportation published by the Russians. The effort to gather Soviet source information for the grid is linked to a concerted effort to gather applicable data, both classified and unclassified, from all other available sources.

The enormous complexity of the computations involved in model analysis makes hand calculation completely unthinkable. In the economic grid for the European Soviet Bloc, for example, there are per unit of output of each of the 240 sectors the commodity input requirements from each of the other 239 sectors. This will be further broken down into 159 geographical regions. Thus the number of coefficients to be simultaneously processed theoretically could be of the order of $240 \times 240 \times 159$, or about 9 million.³ For any major problem millions of individual arithmetic steps may be involved. Modern electronic computers, however, can perform this job. The revolutionary aspect of these computers is the speed with which they can file, sort, recall, and manipulate large masses of data. These partially routine steps in arriving at intelligence estimates on large areas, such as the Soviet Bloc, have always been time-consuming and cumbersome. For the more difficult analytical problems, electronic computers together with mathematical models provide the analyst with a tool for considering and holding in juxtaposition a great many more of the elements of the analysis than formerly was possible. This technique does not, by any means, eliminate the human judgment factor. Rather it is believed that it will prove to be a powerful tool in assisting intelligence analysts and planners to make better judgments, and to be able to make them more rapidly.

Some of the more specific applications of the military resources model to air targets problems are presented below.

1. *Enemy Capabilities*

The military resources model can be used to assess the capability of the economy of the Soviet Bloc to mount and sustain elements of military strength during a pre-attack period under varying Bloc objectives, policies, and assumptions. The government is constrained to work its available resources and within technological relationships. If it wants a jet medium

³The number is actually smaller since many of the coefficients are zero. Only a machine, however, could remember which ones are zero.

bomber regiment it must provide planes, bombs, crews, airbases from which to operate, and so on, in specific quantities. If a ton of steel is needed the government must see that steel mill capacity, pig iron, scrap, coal, labor, and so on, are available in the correct amounts. If more steel capacity is needed it must provide the steel, concrete, machinery, and so on, in the right quantities and types to construct a new steel mill. These resource restraints and technological relationships are set out comprehensively and in detail by the military resources model. The ability of the economy to support the mobilization of desired combinations or "mixes" of air, land, and sea forces can be measured. A typical problem would be a determination of the maximum "balanced" air, land, and sea forces which could be activated in a specified mobilization period with specified stockpiling and capital expansion policies. In addition to measuring the maximum activation of combat units, the economic grid can be used to determine under a variety of Bloc policies and objectives the maximum capability to produce specific weapons such as guided missiles and H-bombs at specified times.

However, the economic-industrial grid does not take into account any restraints or bottlenecks that might develop within the military structure itself. Therefore, the outputs of the economic grid are fed into the military grid as inputs. The military grid is then used to assess the capability of the Soviet Bloc military structure to mount and sustain, during a pre-attack period, elements of military strength fully prepared to engage in combat activities required by given strategies. The ability of the military structure to support desired combinations or "mixes" of air, land, and sea combat activities can be measured under varying Bloc mobilization objectives, policies, and assumptions. In addition to measuring the maximum combat capabilities that can be sustained, the military model can be used to determine the capability of the military structure to put into operation specific weapons, such as guided missiles, within the available military resources, that is, trained personnel, missile sites, logistics, and repair facilities.

The transportation grid would then be used to establish any transportation restraints or bottlenecks which might develop within the economy or military structure itself.

2. *Effects Analysis*

Following their use in pre-attack situations, the three grids of the military resources model can be used to determine the capability of the Bloc economy, military structure, and transportation system to re-mount various types of military strength in the post-attack period after air attacks of different scope and intensity. The analysis can be applied to various time periods after the air attack. In very short periods of time only the military, or possibly the military and transportation grids might come into play, as the answers needed would be the availabilities within the immediate military structure of the Soviet Bloc to re-cycle air attacks and to sustain ground and naval action. These answers would be in terms of availabilities of aircraft, runways, fuel, men, and ammunition to produce flying hours, and the needed inputs to produce ground division months and units of naval action. The longer the time period involved the more industrial and economic resources must be analyzed and brought into play as supporting military resources. In the analyses of recuperation periods of over a few months the economic-industrial grid is heavily drawn upon. However, the model as a whole is designed to cope with immediate post-attack military assessment, as well as long range economic and industrial recuperation assessment.

3. *Selection of Air Targets*

One of the outstanding advances of the model-computer technique is the possibility of rapidly testing a great variety of simulated air targets problems, using various assumptions, and considering air attacks of varying magnitude and scope. Optimum air target systems can be developed for a variety of circumstances as a result of repeated running of both pre-attack capabilities problems and post-attack air target effects problems (a. and b. above). The resources such as airfields, missile sites, storage, supply, repair facilities, and industrial and transportation installations which prove to be limiting factors or bottlenecks in pre-attack mobilization problems and in the re-mounting of combat activities in the post-attack period become the air targets. The same techniques applied in simulated problems would, of course, be applied to actual hot war problems.

4. *Feasibility Testing*

The necessity for balancing the internal flows within the matrix of an input-output model make this type of model particularly suitable for testing the internal consistency of either announced Soviet Bloc plans or of US intelligence estimates of Soviet Bloc military or economic growth patterns. For example, the internal consistency of either Soviet Bloc plans to mount military strength or US intelligence estimates of Soviet Bloc military growth plans can be tested. Estimates independently projected for various types of air combat strength can be tested one against the other in order to determine whether or not the total projected strength estimate is internally consistent and whether or not such total strength can be supported by the Soviet Bloc military structure. The economic grid can be used to check production estimates independently arrived at for various military end products to determine whether or not the production pattern so established is economically feasible. The transportation grid should be of great help in checking estimates of Soviet Bloc transportation patterns and capability.

5. *Mobilization Indicators*

The military resources model can be used to establish indicators of mobilization build-up. By testing the model under various assumed mobilization conditions certain economic changes as well as changes within the military structure can be identified as indicators of partial or complete mobilization. Specific changes in the use of resources can be identified as indicating specific types of mobilization.

6. *Intelligence Collection Indicators*

In using the military resources model to solve a series of simulated air targets problems, certain areas of economic and military activity will be shown to be of critical significance to the capability of the Soviet Bloc to mount and maintain military strength. These critical sectors are those on which it is most important to obtain accurate, current data for targeting purposes. Thus the priority list of air targets intelligence requirements can be sharpened, and emphasis can be placed on the collection of certain key military and economic data.

7. *Inputs for Operational Models*

The military resources model is to be used to translate any given over-all military strategy into requirements upon the

economic-industrial, transportation, and military structure for the creation of military formations and military resource elements together with the necessary military supporting activities in both pre- and post-attack situations. Operational models such as the air battle model, currently being tested, serve to indicate these requirements in a realistic manner. The military resources model is designed to provide appropriate inputs for these operational models in the form of units of combat capability and to reflect the output of operational models in changing requirements upon the military structure. Thus the military resources model can define the maximum levels of combat activity possible within the limitations of the Bloc military and economic structure at any specified time.

8. *Data Requirements*

The validity of problem solutions provided by the military resources model is dependent upon the accuracy of the data inputs as well as the logic of the mathematical design of the model. Each of the component parts of the model — the economic grid, the military grid, and the transportation grid — has its own data requirements which must be initially assembled and subsequently kept up to date.

The economic grid contains a classification of economic activity in the Soviet Bloc in the form of three submatrices or grids; the commodity input grid, the capital input grid, and the capital expansion grid. The data requirements of the commodity input grid or matrix consist of the commodity inputs per unit of production for each of the 240 sectors of the matrix. These sectors cover most of the commodities produced in the Bloc. The data requirements of the capital input matrix consist of the inputs of capital equipment and labor per unit of production of each of these same commodities. The data required by the capital expansion matrix consist of the commodity and capital inputs necessary to increase available capital by one unit. The data described above are in the form of technological coefficients which reflect the technological relationships currently operating as the economic restraints in any desired mobilization or recuperation by the Soviet Bloc. In order to reflect fully the flexibility of the Soviet Bloc economy in meeting mobilization or wartime requirements the data inputs must reflect not only production processes currently in use but also the alternative processes which could be used to

break bottlenecks, or stoppages resulting from air attack. Thus the economic grid requires the introduction of all practical alternate input coefficients in order to establish realistic technological restraints. Because production technology changes with the passage of time, these coefficients must be continually scrutinized to insure that they reflect current technology. In addition, changes are necessitated in the classification of commodities and capital equipment in the light of experience gained in using the model for various types of problems. Those economic sectors which prove to be the most sensitive to mobilization or recuperation demands may require a more detailed or disaggregated classification in the model, whereas less vital sectors may be further aggregated.

The running of a simulation on the economic model requires, in addition to the technological coefficients, data on the economic resources available to the Soviet Bloc for the time period being considered. Thus for each of the 240 commodity groups in the grid, current data on Bloc capacity, inventory, and foreign trade must be assembled.

The data requirements of the military grid of the model parallel those of the economic grid, but pertain to military activities rather than economic activities. As previously mentioned, the output of the military grid, equivalent to commodity outputs in the economic grid, is in units of frontline activity, for example, flying hours of a specific type of bomber. For each such military activity data on inputs of other military activities as well as inputs of industrial commodities must be determined. In addition, for each unit of military activity the requirements of military capital aggregated in the form of "resource elements" such as airstrips, naval bases, and repair facilities must be determined together with the inputs necessary to expand a military "resource element" by one unit. As in the case of the economic grid, input data for alternative processes of producing a unit of military activity must be assembled and all coefficients in the grid must be kept in accord with the most modern logistical processes used by the Soviet Bloc. In the running of simulations on the military grid, data on total Soviet Bloc capacity, inventories, and possible increments from foreign trade for each of the military activities in the grid should be available for the time period under consideration.

The introduction of transportation factors into the military-resources model requires an analysis of the Soviet Bloc economic and military commodity flow structure in terms of geographic regions, thus greatly increasing the data needs. For each region the types and amounts of transportation facilities available must be determined in order to establish the freight-handling capabilities of each region. For example, the analysis of the USSR railroad system, currently underway, requires for each terminal, link, and region estimates of the terminal motive power and freight-car handling capacities, rail-link capacities, and regional car-day requirements. In addition to these transportation data requirements, the Soviet Bloc production and consumption pattern must be established by geographic region. This task requires the identification of the types and amounts of economic and military capital facilities, or "resource elements," available in each region. In addition, the Soviet Bloc "bill of goods," or final demand for military and civilian goods, must be determined by geographic region. The regional consumption of goods for military, government, and civilian use as well as the regional consumption of construction materials and producer durables must be estimated. Only when all these data are introduced into the military resources model can the transportation restraints, or "bottlenecks" under specified mobilization and recuperation conditions be identified.

The data problem is formidable, but considerable progress has been made, and new sources of data are being found and exploited. The data requirements for the model-machine technique do not represent a marked change from the requirements of traditional methods of analysis. However, the rigorous analysis made possible by this technique or method simply makes existing data deficiencies more apparent. Moreover, this technique has the additional advantage of enabling the analyst to identify those specific data requirements which are the most crucial in target analysis by subjecting the data to various types of sensitivity testing, e.g., the variation of coefficients, and data aggregations. The model also offers a means of testing the reliability of coefficients in the light of known output patterns of past years. It is believed that these various testing techniques will contribute to a sharpening of the priority list of intelligence collection requirements.

HORRIBLE THOUGHT

W. A. Tidwell

The headshrinkers' literature is full of remarks about the efforts of mankind to avoid thinking. As a matter of fact, I rather imagine that a very small proportion of the brainpower of the most creative thinker alive is ever devoted to creative thought. In our society a fairly large proportion of this small amount of creative thought is devoted to finding ways to help mankind avoid thinking. Games, alcohol, tranquilizers, TV, and business routine can all be used to help an individual fill 24 hours a day without ever having a creative thought. We like cliches because they help us sound confident without thinking. This does not mean that the average man is idle. On the contrary, he is probably a very active and useful citizen. As a matter of fact, idleness is generally abhorred because it leaves a vacuum that is an invitation to thought.

You and I may be exceptions to this general pattern in some small degree, but I want the reader to recognize that if this paper contains one small original thought, it will be here only as a result of tremendous psychic effort spent in overcoming my own urge not to think, and that if this thought, in its turn, stimulates any creative thinking in the mind of the reader, it will be only over the opposition of your shrewd and dogged subconscious which tries so hard to protect you from the rash act of thinking.

Having drafted this challenge to the reader's subconscious, I now propose that we think about some of the problems of intelligence. (I almost said "*look* at some of the problems of intelligence." This just goes to show you how my subconscious abhors the sound of the word "think.") To pose the problems that I would like us to think about, I want first to go back into a little intellectual history. Some of the readers will be much more familiar with the events that I am about to describe than I am, but here at least is my version.

In the early days of the postwar intelligence effort, the attention of the intelligence community was focused primarily on the interpretation of surface phenomena. Some of the

questions at issue were almost unbelievably naive. For example, there was not complete agreement on the general nature of the Soviet Communist system, and there was a great deal of discussion about the role of local Communist parties; some people feeling that these were indigenous parties, and other people feeling that they were part of the Soviet apparatus. During this period there was no agreement concerning standards of analysis in the intelligence community. At one extreme, some people used biased and emotional arguments without regard to system. At the other extreme, some people claimed that local Communist parties were not part of the Soviet apparatus because there was not enough evidence on this question to settle the matter in a court of law. As time went by, however, the intelligence community more and more came to accept the standard techniques of political sciences, economics, sociology, and so forth, and attempted to conform to academic standards and rule of evidence.

General agreement on standards of thought tended to shift the major problems in intelligence into the realm of facts. If it was agreed that a given situation should be interpreted by the use of the techniques of economics then the size of the gross national product of a country involved in the situation under study became an important fact, having great bearing on the final analysis of the situation. The intelligence community, therefore, went through a period several years ago in which major questions of the fact were important issues. Some of us remember the blood and sweat shed over the numbers of Soviet planes produced, the size of the gross national product of Communist China, and the adequacy of the Chinese railroads. The list could continue *ad infinitum*.

The focusing of the intelligence community on major questions of fact led to the development of additional techniques for the establishment or verification of facts. Some of these techniques, like the factory markings program, could be generally understood and accepted throughout the community. Even in this field, however, and in related fields involving sophisticated statistical techniques, acceptance of the new method was neither immediate nor complete. Other techniques of analysis in political and social fields also left some members of the intelligence community gasping in their wake. At this point, the intelligence community entered a stage which will

always be with us to some extent. It is the stage in which arguments about fact are caused by the technological gap between the informed and the uninformed analyst. This is a gap that training and experience have narrowed considerably and which probably can be narrowed even further in the future, but it probably will exist to some degree as long as some parts of the intelligence community develop new methods and new ways of thinking and other parts of the intelligence community lag in knowledge and understanding. It is not necessarily a bad phenomenon. It at least means that somebody is out in front and doing some thinking. It keeps the other fellows on their toes.

As a result of over 10 years of development, the intelligence community has now reached a high level of sophistication in the application of standard techniques of analysis to intelligence problems. Subsidiary methods such as style of writing and the manner of presentation are excellent. The community seems to have learned how to produce very good answers to intelligence problems without generating an undue amount of internal friction. All this is cause for considerable pride and satisfaction.

As good as we may be, however, we are obviously not good enough. We have just seen a classic example of one of our major outstanding difficulties in the question of US policy toward the launching of the Soviet earth satellite. There was no failure of intelligence to report the facts relating to the Soviet satellite program well in advance of the event, and intelligence also pointed out that this event would be of distinct advantage to the Soviet Union in the field of political prestige. Intelligence had done the job our customers normally expect of us, and yet in a real sense, the US was caught napping. The US prepared a plan of what to do *after* the Soviets had launched a satellite, but we did not take any action or even decide to take any action *before* the event. In other words, our planners did not fully recognize the magnitude of the blow the Soviet launching would give to our prestige. It would be very easy for us to sit back smugly and blame the unfortunate consequences on the policymakers, who were adequately informed in advance but who did not take adequate action in advance. Could it be that we have not yet established adequate confidence in our product in the minds of our consumers? Could it be that the

fault still lay with the intelligence community? Could it be that we have not yet devised the proper method of presentation which would permit us to say "damn it, we mean it!"

If we are willing to recognize that it is possible for intelligence to "fail" even when it is shrewdly accurate and timely, we might find further food for thought in looking at the problems that we are being shrewdly accurate and timely about. They tend to be problems that have a fairly immediate practical application. No one could object to our tackling such problems. When one looks for analysis in depth or in terms of long-term trends, however, we find that it is generally lacking in our formal publications. The bold analysis, the sharp intuition, the long step ahead, and the provocative ideas are generally found in informal bull sessions; in "think" pieces that have no true status; in the internal staff memoranda of ONE, OCI, and so on; and in some of the briefs and background material used by the DDI on an ad hoc basis. They are almost never found in the formal papers put forward by the community for the sober guidance of our planners and policymakers.

There are strong conservative influences in our present system of producing intelligence which would tend to resist change in anything involving method and type of analysis, form of presentation, and so on. Might we not be at a point of development, however, where we need to make a quantum jump in the conduct of intelligence? Is there any way in which intelligence can learn to say better "we mean it," "these are the problems that may arise in consequence," "these are the decisions that must be decided?" How can we extend our analysis in time and depth beyond present dimensions and yet carry with us the conservative elements in the intelligence community?

There might be changes in organization or in the mechanics of presentation which might improve our impact on the formulation and execution of national policy. These things should be explored, but no such changes could create, by themselves, the change in the intellectual and visceral impact of intelligence that we must aim for. The only sure way to conduct national affairs with greater wisdom is for the responsible officials to think smarter thoughts. There is no mechanical or organizational substitute for brains. Intelligence is an important and integral part of the process by which we conduct our national affairs, and intelligence officers, therefore, have a

tremendous responsibility to apply themselves to new ways of thinking which will give us a more brilliant insight into the dynamic world and our constantly changing place in it.

The real area in which we must seek improvement, therefore, is in that related to analysis. Perhaps we must learn to pose a different kind of question to ourselves. Perhaps we need to learn to think on a different time scale. Perhaps we need to develop even more new methods of analysis. Perhaps we need to do some combination of all of these things, and many others as well.

There are probably many different ideas that should be examined. Here is a sample of the kind of thing that we might think about. Might it not be useful for us to engage systematically in backward analysis from hypothetical cases? For example, intelligence predicted the launching of the Soviet earth satellite and said that it would have unfortunate consequences. But let us suppose that several years ago we had posed the following question: "What would be the impact on the policy situation of the US and on its prestige if the Soviet Union were to accomplish some technological breakthrough which would support a Soviet claim for Soviet supremacy in the field of science and technology?" If we had had this sort of analysis, it might have been possible for us to point out in a much more meaningful manner the way in which the Soviet missile program and the development of a Soviet earth satellite might place the Soviet Union in the favorable situation envisaged in our hypothetical analysis. We could pose other similar questions such as: "What will be the effect on the world political situation when Soviet industrial production equals US industrial production?" "What would be the consequences if all of the 'third force' groups backed by the US came to power and 'right wing' parties disappeared?" "What would the world look like after 20 years of disarmament and 'peaceful coexistence'?" Analysis of these questions might put a vastly different light on intermediate developments leading toward the hypothetical situation we have posed for ourselves.

There is undoubtedly room for improvement in our work, but unfortunately as we get better and better, we have more and more justification for continuing to think and do exactly as we have been thinking and doing. This is more and more justification for not thinking creatively about improvement. We

know, however, that there will always remain an important challenge to us in intelligence as long as the US does not act to accommodate itself adequately to world developments. What do you think that we should do about it?

ELINT A SCIENTIFIC INTELLIGENCE SYSTEM

Charles A. Kroger, Jr.

During the initial phases of the Battle of Britain, a German bomber, relatively safe under cover of darkness, flew over the blacked-out landscape heading for London. At a specific moment, the bomber dropped its bombs, which accurately hit their target, and another successful German Luftwaffe attack was history. Electronic advancements by the Germans made this possible. British interception and analysis of this new electronic bombing device countered the Germans' success and continued to render less effective every subsequent electronic advantage the Germans developed. In a parallel manner, the Germans developed a highly effective electronic intelligence effort directed against the Allied raids originating from Britain. This phase of electronic intelligence, utilizing electronic means to determine enemy electronic capabilities, began in England just before World War II and has been an ever increasing effort which today is called ELINT. *Dec 9 not for release*

ELINT is a coined word for the process of electronic intercept and analysis or electronic intelligence — a process about which very little has been written. The intelligence officer, unless he is in the electronics field himself, has had little contact with ELINT. By directive, ELINT is defined as: "the collection (observation and recording), and the technical processing for later intelligence purposes, of information on foreign, non-communications, electromagnetic radiations emanating from other than atomic detonation sources." In simple terms, ELINT is the detection and analysis of radiations from foreign electronic devices for the purpose of extracting information of value to intelligence.

Just as a flashlight radiates a beam of light observable to the human eye, electronic devices emit or radiate nonvisible, non-audible radiations which are detectable and recordable, using electronic devices just as the human ear hears sound. This interception or collection of enemy radiations is the first stage of ELINT. *that is the purpose*

The formal definition restricts ELINT to "noncommunication electromagnetic radiations other than atomic detonation"

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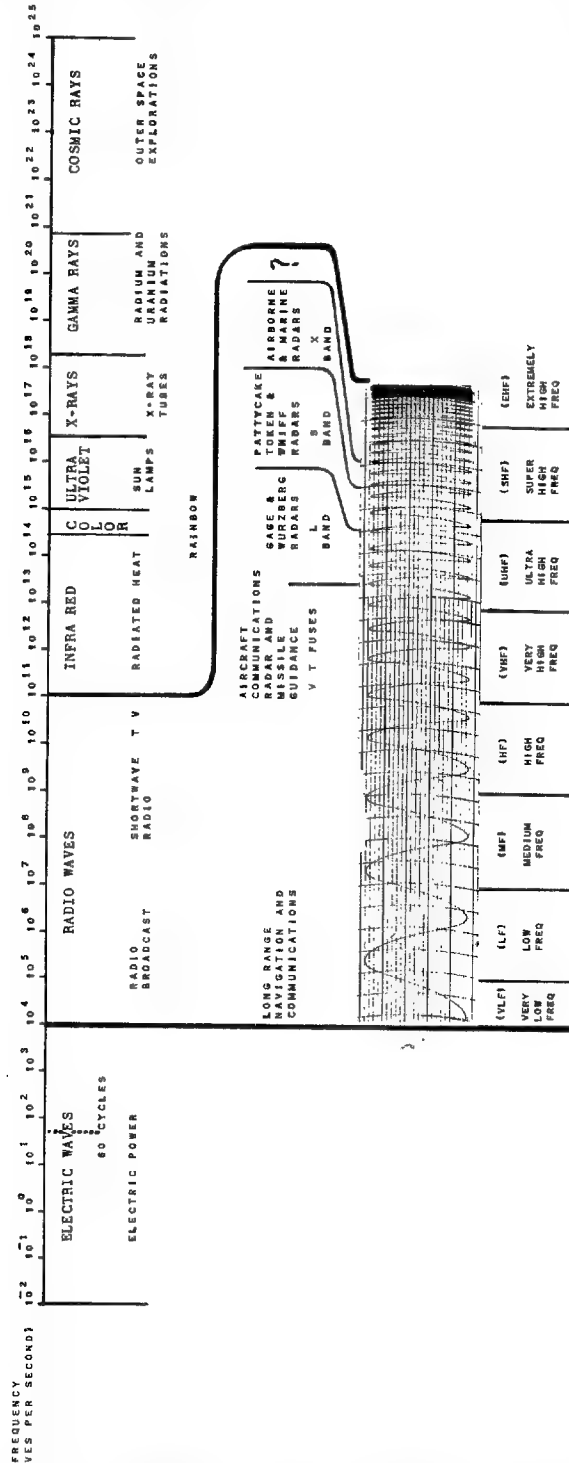
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sources." This means that ELINT is responsible for all radiations except those used in voice or other communications such as radio or telegraph and those resulting from atomic sources. What other kind of radiations are there? To name a few with which ELINT deals, there are radiations from missiles and missile guidance devices, radiations from developmental laboratories and field testing stations working on electronic devices, radar, navigational aids, anti-aircraft and aircraft gun direction, air-to-air or air-to-ground identification signals, and so on.

"Technical processing for later intelligence purposes" means subjecting the collected ELINT raw data, usually in the form of beeps on a magnetic tape or wire, to a detailed analysis by use of complex electronic equipment. This equipment permits the analyst to hear with his ears, to see on an oscilloscope, to measure very accurately, to photograph, to compare with standards and to investigate the intercepted signal in as many ways as are necessary to identify the characteristics of the foreign device. When the "technical processing" is completed, the technical analyst can pass to the intelligence analyst detailed information on the location and capabilities of the foreign device. The intelligence community can then combine this information with other knowledge to estimate the over-all competence and possible intentions of foreign powers.

For a technical look at what ELINT really is let us turn for a moment to basic physics. Here we remember that electromagnetic energy, like light, travels in waves. These waves vary in length and form a spectrum. We are all familiar with the rainbow with its colors ranging from red, having waves of 760 millimicrons in length (400 million megacycles/sec), to violet, with waves of 385 millimicrons in length (800 million megacycles/sec). This color spectrum is a part of the electromagnetic spectrum. The radio portion of this electromagnetic spectrum is used primarily for communications and military weapons. Currently, the military weapons use radio waves varying from a few thousand cycles (waves per second) up to 100 kilomegacycles (one hundred billion waves per second). The following diagram illustrates the position of the radio and color spectrums in the over-all electromagnetic spectrum and an expansion of the radio spectrum showing the bands where different Soviet electronic devices radiate.

ELECTROMAGNETIC SPECTRUM



For a specific example of how ELINT works, let us take a simplified look at Soviet radar. Soviet radar devices radiate electronic impulses at certain frequencies and in definite beams searching the sky for long distances and great altitudes for any object that may be present. When these impulses strike an object they bounce off and return to a ground or airborne receiver which calculates the length of time between emission and reception and the strength of the signal received. From this, the Soviet radar operator can generally tell the size, speed, direction, altitude, and other pertinent information about the unseen object. Our Strategic Air Command, with its retaliatory mission, urgently requires every possible bit of information on Soviet radars — particularly on their location and capability. This is where ELINT goes to work. By intercepting, amplifying, recording and analyzing an enemy radar signal or pulse, we can learn all about it. By studying the type of radiation, its modulation (AM, FM, pulse) its pulse repetition rate, pulse duration, pulse shape, its radio frequency (position on the electronic spectrum), its antenna pattern characteristics, and so on, we can identify the radar, compare it with known information, ascertain its range, location, use, and other essential information required to evaluate its capability as a radar and its susceptibility to countermeasures.

This same process of ELINT pertains to any and all enemy electronic devices including airborne intercept devices used by guided missiles, guided missile launchers, fighter aircraft, long-range and short-range navigational aids, ground controlled intercept height finders, anti-aircraft and aircraft fire control radar, blind bombing devices, electronic radiations emanating from scientific laboratories or production plants, ~~and so on.~~

What do these radiated signals sound like? Frankly, they sound like noise or radio static during a thunder storm, ~~in fact,~~ before the more euphonious term of ELINT was coined, the British called it "Noise Listening" and, during World War II, had a "Noise Listening Bureau."

Although ELINT is a very complex field — constantly looking beyond present knowledge of electronics to fulfill its role of providing timely information on new foreign electronic developments, it need not be pushed aside as too complicated to be understood. Because of its complexity, some members of the intelligence community are inclined to throw up their hands

and ignore this potential tool. However, ELINT is not too difficult to comprehend or use, nor is it an end in itself, but it can contribute essential, accurate information to the intelligence process.

Scientific intelligence and, in particular, ELINT, or electronic intelligence, had its start in England immediately before World War II. Early in 1939 the British Committee for the Scientific Study of Air Defense first drew attention to Britain's ignorance of new German weapons. One scientist, Dr. R. V. Jones, was appointed to look into the matter. Before he even started his task the war broke out and in June 1940, Dr. Jones, after considerable study, concluded that the Germans had developed a radio beam by which their bombers could operate over England regardless of weather, darkness, or cloud cover and still be most accurate in their blind bombing. This beam, just a little more than one-half mile wide, passed directly over London. Based on Dr. Jones' conclusion, steps were immediately taken to find any possible countermeasures. A Royal Air Force search aircraft was outfitted and it accomplished its mission of looking for and detecting this German beam. Technical analysis of this information provided the radio frequency and other characteristics of the beam, thus permitting the British to jam it and render it ineffective. Henceforth, many bombs intended for London fell harmlessly on the open countryside. This interception and analysis of an enemy electronic radiation (later known as Knicklbein) was the birth of present day ELINT. The Germans altered their beam system and soon began using a better system utilizing intersecting beams referred to as the "X" apparatus, which provided greater accuracy. These beams were at a different frequency than Knicklbein, requiring new search and analysis before the British solved this new threat and took countermeasures. With the "X" apparatus, the bomber flew along an electronic beam while its position along the beam was observed from a German radar station on the continent. When the bomber was over the target, it was told to drop its bombs. By now Britain's ELINT capability of intercepting and analyzing this electronic information was quite effective and continued to grow in scope and importance throughout the war.

During World War II the US made extensive use of electronic intercept devices in both the Pacific and European Theatres of

Operation. Special USAF and Navy planes equipped with ELINT receivers ferreted out the secrets of German and Japanese antiaircraft radar and aircraft warning devices. From the use of such planes the word "ferret" was coined, a term presently applied to aircraft equipped to investigate enemy electronic radiations. Among the most deadly weapons directed against the Eighth Air Force were the German antiaircraft guns which were equipped with extremely accurate radar directors known as "Wurzbergs." The close formations of American aircraft made a juicy target for the more than 16,000 German antiaircraft guns. By use of radar intercept equipment (ELINT equipment) information was obtained which permitted the use of jamming devices, and thus the one-billion dollar investment of the Germans in their Wurzberg radars was literally ruined by the countermeasures made possible through ELINT. Knowing we had this capability, the Germans began a frantic search for non-jammable radar equipment, but the war was over before they succeeded.

Following World War II there was a period in which interest in ELINT, as in many wartime activities, tapered off. Some effort continued but the real push to provide intelligence on electronic advancements in other countries was not initiated until the USSR clamped down its Iron Curtain. Since that time, the collection and analysis of electronic signals radiating behind the Curtain has been the constant goal of ELINT. Since the birth of ELINT in 1940 the effort has grown in size, cost, importance, complexity, coverage, and capability, and, like most scientific efforts, is making yesterday's limits, today's capabilities.

Electronic intercept, to use one connotation of ELINT, provides factual information. Unlike the collection of much intelligence information where we are forced to rely on word of mouth, memory, or integrity of source, electronic radiations are intercepted and recorded by machine. If a signal is being radiated it can be recorded and later reported accurately even by someone who doesn't understand all that he is doing. Because of this factual nature, ELINT has provided substantiation of many intelligence estimates based on other intelligence processes.

During World War II, Air Force B-24 aircraft and radar-equipped Navy Catalina aircraft were assigned the job of locat-

ing enemy radar in the Pacific. They spotted and pinpointed Japanese air-warning sets scattered all the way from the Solomons to the China coast. A few days before the Leyte landing in October 1944 one of the 'ferrets' discovered a new Japanese radar on Suluan Island at the mouth of the Leyte gulf. As this radar commanded the approaches to the Leyte coast line it was necessary to eliminate it and this was done on a commando raid by the US Rangers.

Currently, ELINT is providing the Strategic Air Command with the intelligence it requires on the location and range of Soviet radar. Through ELINT, information is acquired on the method, capability, and limitations of Soviet long-range navigation systems upon which their atomic bombers rely. Soviet missile tests are monitored by ELINT and the point may soon be reached where, by interception and analysis of the telemetering signal from Soviet missiles, we will acquire missile performance data vital to our National Intelligence Estimates. (Telemetering is the electronic system used in missile testing which records, codes, and transmits to ground test stations such things as missile speed, flight path, guidance, skin temperatures, and other behavior characteristics of the missile in flight.)

Since early in World War II, the Army, Navy, and Air Force each have expended varying degrees of effort on ELINT, and in 1952 the Central Intelligence Agency entered the ELINT field. Although much of this individual endeavor was valuable, in 1954 better organization was given to ELINT — organization on a national level. The lack of proper dissemination of valuable intelligence produced by one organization but not always readily available to the others in the community, was noted as a serious problem. When this situation came to the attention of the National Security Council a study was made, and National Security Council Intelligence Directive No. 17, entitled Electronic Intelligence (ELINT) was issued (in May 1955). NSCID-17 established the first national policy for ELINT and it is still the basic authority for the national ELINT program. It directed that:

- a. The US Communications Intelligence Board (USCIB) shall be the national policy body for ELINT.

b. The Department of Defense and the Central Intelligence Agency shall be responsible for their respective ELINT collection activities.

c. The technical processing of all ELINT shall be accomplished in a jointly-staffed center administered by the Department of Defense.

d. All data collected by the collection agencies shall be made available to the National Technical Processing Center (NTPC).

e. The NTPC shall effect the fullest and most expeditious processing possible and furnish the results to the interested agencies.

The present national organization for ELINT is rather complex, with many interlocking organizations and many formal and informal coordinating committees. The important consideration is that each of the services and CIA is free to run its own collection operations designed to furnish information it alone requires, but is expected to submit all collected data to the NTPC subject only to the minimum delays necessitated by prior exploitation for urgent tactical or operational purposes. One can immediately see the strong vertical organization for ELINT within each major component. It should also be appreciated that much horizontal collaboration is being accomplished by joint participation in such organizations as the NTPC and AFOIN-Z in an effort to coordinate individual activities into a national ELINT program.

In October 1953 a study was made of ELINT in CIA. This resulted in the appointment of an Agency ELINT staff officer and in the preparation of an Agency ELINT program which the Director of Central Intelligence approved on 29 May 1954.

Within the Agency ELINT is organized generally as follows. The Office of Scientific Intelligence develops targets and requirements for ELINT collection, furnishes scientific and technical guidance to Agency collectors, and performs the technical analysis and collation of ELINT with all source material in the production of scientific intelligence. The Clandestine Services conducts a continuing review of the potential and capabilities for covert ELINT collection, implements specific clandestine activity in response to approved ELINT require-

ments, and coordinates US ELINT clandestine activities with foreign governments. The Office of Communications arranges for research, development, and procurement of ELINT equipment as required to support clandestine ELINT collection. The CIA ELINT Staff Officer advises the Deputy Director of Central Intelligence and appropriate operating components on the formulation, implementation, and coordination of ELINT plans, policies, and programs.

On the national level, much work has gone into summarizing what each organization requires in the way of information on enemy electronic developments. This sizeable task has resulted in a formal statement of the currently definable Specific ELINT Collection Requirements (SPECOR). This collection guide is based on the priority of the National Intelligence Objectives. It has been disseminated throughout the services and CIA field units for guidance as to what information the intelligence community requires and in what priority.

To realize the need for an adequate requirements system, consider that the ideal ELINT system is one capable of collecting all signals of interest and extracting all of the useful information from each signal. This is neither possible nor practicable, however. The questions of just what signals are of interest and just what information about them is needed must be answered in the light of the gaps in our intelligence. Thus, as in other branches of technical intelligence, ELINT is faced with the problem of relating scientific techniques to intelligence problems.

In general, ELINT targets fall into two major categories. The Army, Navy, and Air Force, charged with the military defense of our country, are primarily concerned with the location and capability of all enemy radar (on a current basis). This is referred to as the Radar Order of Battle (ROB). The Air Force, for instance, must know where the heavy concentrations of enemy radar are so that its planes can either skirt the area or take proper countermeasures. The largest portion of intercepted enemy electronic information falls into this category of maintaining an adequate radar order of battle. CIA, on the other hand, is primarily interested in scientific break-through, or in not being surprised by new enemy electronic develop-

ments. This means that most ELINT effort is directed toward the interception and analysis of new and unusual electronic signals. Naturally in the course of searching for new and unusual signals, much order of battle information is received. This serves, in addition to supplementing the services operations, as a basis of comparison to determine what is new and unusual. The ELINT objectives of first priority to CIA relate to those signals which have yet to be intercepted or for which the radiating source has yet to be seen. Specifically, the targets are as follows:

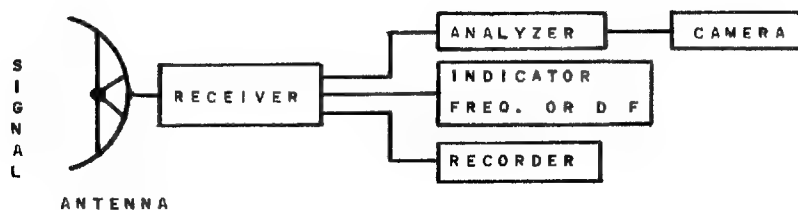
a. Those non-communication signals which are, or are suspected to be, associated with the Soviet or Satellite ability to deliver atomic or other weapons of destruction — that is, guidance or telemetry signals associated with missiles, airborne navigation, and bombing systems.

b. Those non-communication signals which are or are suspected to be associated with the Soviet or Satellite ability to defend their countries against the delivery of atomic or other weapons of destruction — that is, early warning, ground-control intercept, gap-filling radars, surface-to-air weapons systems, airborne weapons systems, ground surveillance systems, jammers, and so forth.

c. Those signals occupying an unusual portion of the radio frequency spectrum not normally associated with Soviet or Satellite equipment.

The equipment involved in ELINT is elaborate and complex. To make matters worse, the higher up the frequency spectrum you go the shorter your intercept range becomes, and the present trend toward higher frequencies means that ELINT equipment must get closer to the target or be designed with greater ranges, both of which approach the impossible.

ELINT equipment falls into two main categories: collection equipment (airborne, maritime, fixed station, or agent-carried) and analysis equipment (used on the ground to reproduce, readout, and analyze the collected information). Basically, the major components of an ELINT collection system are the antenna, receiver, recorder, direction finder, and analyzer.



The antenna corresponds to the human ear. It is that component which first detects a signal. It is, of course, desirable that the antenna be very sensitive or, as we say in ELINT, "have high antenna gain." This permits the maximum intercept range. The ideal antenna system would have the following characteristics:

- a. a continuous and fixed broad area coverage,
- b. very broad electronic spectrum coverage,
- c. very high gain,
- d. inherent capability for giving directional information.

These requirements are not all compatible. In practice it is necessary to compromise in order to gain a workable system. The decision as to which of the desirable characteristics can be safely compromised, and to what extent, is based on the frequency range of interest and also on the specific ELINT target under consideration. For instance, broad area-coverage may be obtained by either of two means — a broad beam antenna fixed in space or a narrow beam, scanning antenna. The first method demands a sacrifice in gain; The second limits the time coverage of any part of the total area.

Following receipt of the signal by the antenna it is passed to a receiver. The function of the receiver is to convert transmitted information available at the antenna into a form that can be measured and recorded. Basically two general types of receivers are in use today — the superheterodyne and the crystal video. The operating characteristics of each receiver may be outlined as follows:

Superheterodyne — slow scan.

- a. inherently high sensitivity,
- b. good frequency resolution,

- c. prohibitively long search time in many cases.

Crystal video — wide open.

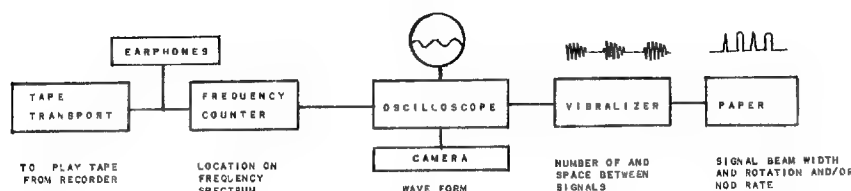
- a. low sensitivity reducing maximum probable range,
- b. frequency resolution problems,
- c. search time considerably less than the super-heterodyne.

From the receiver the signal goes ~~next~~ to the recorder where the signal is stored on magnetic tape or wire. There are two main reasons for recording signals. A permanent record of the signal is required for future analysis and for records, and on signals of short duration or higher complexity, the operator may not have enough time or capability to evaluate the signal parameters before the transmission is ended.

Direction-finding equipment is sometimes utilized during the interception of the signal. It displays incoming signals on an oscilloscope or other azimuth-reading device giving the direction of the arrival of the signal.

Analyzers in the ELINT collection system are sometimes used during interception to provide a preliminary observation of the type of modulation and to measure the repetition rate, duration, and general shape of signal pulses. Signals are usually presented by a cathode ray tube (similar to a television screen), which provides a moving picture of the shape, size, and nature of the incoming signal pulse or wave form. The pictures are usually photographed as a permanent record. It should be pointed out that ELINT collection devices need not be huge ~~in size~~, as are those used in ground, sea, and some airborne operations. Quite to the contrary, considerable use is made of miniature equipment no larger than a book. ELINT collection equipment is usually designed for the specific situation involved, whether it be a 60-foot parabolic antenna on the ground or a tiny, unassuming, hand-carried package.

The major components of an ELINT analysis system vary greatly with the purpose of the analysis. Order-of-battle analysis is often done automatically by IBM-type equipment. The analysis that CIA performs is not for order of battle but is to identify new and unusual signals. For this, man-operated equipment is required and an analysis position contains at least



the following fundamental equipment: a tape transport used for duplicating or monitoring; a counter that measures and illustrates the modulation frequency; an ink-on-paper recorder to draw a continuous trace of the signal amplitude; an oscilloscope, which permits observation of the wave form; a vibrator to display modulation frequency components versus time; filters to separate signals; a rapid-advance movie camera; and a host of other equipment to permit the analyst to scan great volumes of tape and film to separate that minute portion which, upon detailed analysis, may prove to be a new electronic development.

It is hoped that this basic discussion of ELINT will provide a general concept of this complex scientific intelligence process. It should be realized that in the interest of readability many points have been simplified and technical details omitted so as not to confuse the non-technical reader.

If one considers that one-third of the cost of a modern fighter aircraft goes for electronic equipment and that most of the electronic devices which make up this equipment radiate signals, then one begins to understand how much there is to learn of Soviet capabilities by examining their use of electronics. This also applies to ground and sea weapons, including missiles. Recent news reports of Soviet developments in the scientific field demonstrate how heavily the Russians are relying on electronics and how advanced their development is. The Soviet earth satellites with their radiated signals are a responsibility of ELINT. ELINT must continue to intercept and to analyze Soviet electromagnetic emissions preferably in the research and development stages in order to keep abreast of Soviet electronic advancements and to attempt to predict future capabilities.

REPORT ON HUNGARIAN REFUGEES

Guy E. Coriden

The Hungarian Revolution of October 1956 provided an unprecedented opportunity for the collection of intelligence on a Soviet Bloc country. Each of the many facets of intelligence activity played its role. Every known Free World and Bloc intelligence organization was involved. Every Hungarian refugee who could toddle was a potential target for an intelligence-minded group. It is obviously impossible, therefore, to claim with good conscience to tell the "intelligence story" of the Hungarian Revolution. It is also impossible to get the many participants to agree on which of the many efforts was the most fruitful. This, then, will be the account of one activity — the collection of the intelligence information and material from the Hungarians who were admitted to the US. Other operations will be mentioned only as they are considered pertinent. Because the opportunity was unique, certain adaptations in intelligence collection methods were required to take full advantage of it. The object was to extract the maximum amount of intelligence at a minimum cost while still abiding by decent rules of human conduct. As the methods used were necessarily determined by the processing and resettlement procedures as well as by the official US Government attitude toward intelligence exploitation, it might be well to begin with a brief historical background.

The story of the revolution has been told many times, probably best by the UN in its massive report. The outbreak took place on 23 October 1956, and in the months following, it is estimated that 188,000 Hungarians found refuge in Austria and 18,000 in Yugoslavia. As of 1 September 1957, approximately 35,000 of these refugees had accepted asylum in the US.

In early November 1956, when it became apparent that a massive influx of Hungarians was going to have to be resettled, it was decided that Camp Kilmer, New Jersey, would be the processing center for all of the refugees. Because the installation was an Army camp, the Army was charged with the initial responsibility for coordinating the resettlement effort and providing all of the housekeeping services. On 12 December 1956,

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however, the President appointed a civilian Committee for Hungarian Refugee Relief under the chairmanship of Mr. Tracey F. Voorhees. This Committee has coordinated all activities in connection with "Operation Mercy." In the process it utilized the services of more than 20 volunteer and governmental agencies. From the arrival of the first refugees on 21 November 1956 until early May 1957, when Camp Kilmer was closed, transportation was provided by 214 MATS flights, 5 Military Sea Transport Service (MSTS) ocean voyages, and 133 flights chartered by the Intergovernmental Committee for European Migration (ICEM). The Bureau of Immigration and Naturalization and the Public Health Service performed the functions necessary for admitting aliens to the US, and various charitable-religious agencies arranged for most of the resettlements. Part of the job of fitting the individual's skills to available employment opportunities was performed by the National Academy of Sciences and the US Employment Service. The processing and resettlement was handled with an amazing degree of efficiency, and the sympathetic attitude of the American people was so sustained that by early May it was possible to close Camp Kilmer. About 32,000 of the refugees had been dispersed to various parts of the country, and those remaining are being shuttled through the St. George Hotel in Brooklyn.

Lest the cursory nature of this account convey the idea that this was a simple and smooth process, remember that the operation involved the complete transplanting to the US of a large number of participants in a violent revolution who had lost most of their possessions and who had little or no knowledge of the English language. Only 6,500 of these could come under any available immigration quota. The rest were admitted under the Attorney General's discretionary authority, and the rules were established and changed several times. Indeed, methods and procedures were developed, abandoned, and reinstituted many times in the early days of the operation. Also the prevailing attitudes, both official and public, changed appreciably over the months. In the early days the primary concern was to provide a humanitarian welcome for the victimized Hungarian people. Every effort was made to avoid incidents which might cause unfavorable comment. This attitude was motivated by a genuine sympathy and admiration for the Hungarians and a determination to take full advantage of

the propaganda opportunity against the Soviet Bloc. As the spotlight of international interest turned elsewhere, concern for internal security and the collection of material bearing on motivations came to the fore.

A few statistics may help to give some idea of the scope of both the intelligence collection problem and the opportunities. Hungary is a nation with a population roughly equal to that of Pennsylvania and a land area just slightly smaller than that of Indiana. About 65 percent of the population was considered to be rural, and 16 percent was concentrated in Budapest and its environs. The 188,000 people who fled the country during the great exodus represented about 2 percent of the population. No age distribution is readily available for pre-revolutionary Hungary, but 83 percent of the refugees received into the US were under 40 years of age, and approximately 64 percent of them were males. This is certainly not a typical slice from an old country in a near postwar period. Also despite the fact that Hungary is predominately rural, less than 1 percent of the group coming to the US admitted to being engaged in agricultural enterprises. This is probably easily explained on two counts: first, the land owners, even collective farmers, are less likely to leave than the landless; and second, those of rural background, faced with new opportunities and feeling that they have little prospect of owning land in the new country, are likely to follow the prevailing trend toward city occupations, even to the extent of falsifying their background statements. Another survey of the refugees who were over 16 years of age (excluding housewives) revealed that the average education of the group coming to the US was almost 10 years.

The fact that the refugees were young, well educated, male, and engaged primarily in nonagricultural enterprises is a happy one when we think of the group both as a national asset and as a positive foreign intelligence target. The additional fact that this predominately urban group formed about 1 percent of the total population of a small agricultural country should mean that not only every trade and industry but every major enterprise should be represented by a delegate in the US group. It is well recognized that a certain number of the Hungarians probably succumbed to the human tendency to exaggerate and alter their backgrounds, but it is believed that the distortion is not significant for our purposes.

In November 1956 the intelligence community faced the problem of exploiting the Hungarians without the benefit of even the crude statistics presented in this article. The known facts were that tens of thousands of Hungarians were crossing the border to seek refuge in the Free World. Some were sincere patriots who had jeopardized their lives for their country in the revolution; some were opportunists seeking economic betterment; and some were intelligence agents with missions to collect intelligence, to establish nets or to report on the activities of Hungarians in the first two categories. Austria found its border area inundated with the Hungarians and could not screen them thoroughly with the resources at its disposal. At the same time the Austrian government did not wish to provoke the Soviet Union by allowing other Western nations to set up obvious intelligence procedures as a first step in the resettlement process. A number of the refugees were willing and even anxious to impart information of value to the Western powers, both for patriotic reasons and in order to secure more favorable treatment. The more enterprising of these found their way to one or another of the overt US or UK missions operating in Austria. Reports coming back from these missions were the first indications of the high caliber, intelligence-wise, of the refugee horde. It was impossible to begin the problem of cataloguing the intelligence assets in Austria, so the next best thing seemed to be an attack on the same problem in the US. The NSCID #7 Committee has the responsibility for domestic exploitation. It was now faced with the problem of exploiting a large, but indefinite number of sources without any prospect of additional manpower to meet the vastly increased workload.

In casting about for a solution to such an undertaking, the training cadre of the Armed Services Prisoner Intelligence Committee (ASPIC) seemed best fitted for the mission in terms of qualifications and availability. This was an Army-Navy-Air Force-CIA unit which, in time of war, could be expanded to deal with certain aspects of the prisoner interrogation problem. At the time of the Hungarian eruption it consisted of a group of intelligence language experts furnished by the Army and Air Force as a basic cadre. Under the auspices of the NSCID #7 committee, advanced units of ASPIC were sent to Camp Kilmer in December to establish a process for assessing the intelligence

value of the refugees, in preparation for a full exploitation. At this time the prevailing sentiment among those responsible for "Operation Mercy" was a desire to extend undiluted Western hospitality to the Hungarians. At this early stage there was an attitude of mild horror toward any intelligence activity. The advanced unit found it necessary, therefore, to act under a cover — the Historical and Statistical Survey Team (HSS). The activity of the unit was restricted to obtaining background information on the individual Hungarians and collecting such documents and possessions as could be pried loose without creating a furor. Through its own efforts and with the cooperation of the authorities who were processing the Hungarians, HSS was given ready access to the information which was available to all processing authorities. This information generally consisted of name, place of birth, former occupation, military service, and, in some cases, education and language capabilities. Because of language difficulties and a normal human desire to describe one's background in the best light, the education and occupation data were of limited value. With the permission of the authorities a certain number of the refugees were selected for extended interviews. Here again the prevailing sentiment toward humanitarianism, the complications of processing the many homeless, confused people in a humane and overt way presented an amazing number of difficulties for the surveying teams. Refugees were difficult to locate, suspicious, or overly garrulous. The intelligence operation was at the low end of the priority scale at the camp. There was inclement weather, a complicated system of drawing meal tickets, and the usual spate of unsettling rumors. Methods were developed by HSS on one day, altered the next, and discarded on the third day — all in response to the changing conditions and reactions. On the basis of the original inadequate information, about 6,000 refugees were selected for their intelligence potential and were asked to submit to an initial interview. Of these, about 3,600 complied with the request, and slightly more than 2,000 proved to have sufficient potential to justify recording a Preliminary Interrogation Report (PIR). These ranged from scientists or ministerial officials with detailed knowledge of intra-Bloc operations to private soldiers with knowledge of troop and supply locations in one limited area.

After it became apparent that the refugee flow was no longer the primary news topic in the country, it was decided that an effort would be made to carry on a more intensive intelligence collection effort at Camp Kilmer. This decision was based on the fact that an operation carried on there would catch the refugees before they became involved in the problems of adjusting to living conditions in their new environment and would entail much smaller cost to the US intelligence services. The fact that an individual's memory of a situation does not improve with the passage of time was also a primary factor in this decision.

There was, of course, much thought given to the method for securing full cooperation of the refugees within the framework of the humanitarian effort. The refugees were usually willing and eager to impart all possible information. The common sense things were generally most efficacious in getting the cooperation. An interviewer competent in the refugee's field generally established satisfactory rapport rapidly. Cordiality, creature comforts, and a symbol of US Government officialdom were helpful. For instance, invitations carrying a large official looking stamp secured far better results than those merely stating that the US desired that the refugee report to a particular building. The air of uncertainty was also valuable. The refugees who were contacted soon after arrival were easier to work with than those who were around long enough to learn that they were safe and could extract favors in return for services or information. When the refugee reached his destination and was integrated in a community, protective relatives and friends frequently became a barrier or encouraged a suspicious attitude. Simply stated, the refugee, like a bewildered child in an unfamiliar situation, responds best to a friendly, solid person who understands him. As he becomes wise to the way of the new world these psychological factors favoring cooperation disappear. Then each case takes on more individuality and the treatment which has placed the refugee in this specific situation is the important thing to look into for any needed lever to cooperation.

It was decided that to take advantage of the situation the intensive intelligence exploitations should be carried out by a second interagency group with the cover name of US Sociological and Technical Research Unit (USSTRU). This unit was

activated on 10 January 1957. While maintaining some semblance of separate operations, HSS and USSTRU cooperated fully; and when conditions permitted, sources were shuttled from one to the other. About ninety different individuals from CIA, comparable numbers from the Army and the Air Force, and a few from Navy and State participated in the USSTRU operation. No large portion of the group was there at any one time — the ceiling at the peak of the operations was about 60 persons from all participating agencies. Because in the case of USSTRU the most effective collection could be done by analysts and intelligence officers having knowledge of the particular areas covered and gaps to be filled, specialists from all parts of the intelligence community were rotated to Camp Kilmer for time periods varying from a few days to several weeks. Members of both intelligence units operated with a degree of dedication comparable to that shown by the people engaged in the processing and settling of Hungarians. For most of the period the work week consisted of seven 12- to 14-hour days.

Although the constant flow of experts through the intelligence operating units provided the best qualified interviewers, they also created continuing problems. The light cover required a certain degree of caution which was difficult to maintain under the circumstances. This mass participation method, however, had the added advantage of acquainting the whole intelligence community with the potential of the Hungarian refugees and the problems involved in exploiting this potential. Many of the large number of analysts involved were given their first experience in interviewing a source through the use of an interpreter and in reporting on information in which they were not expert. We have introduced the problem of interpreters, and this might be the place to say that early in the game two language factors came to light: (a) the intelligence community probably has fewer language specialists in Hungarian than in any other but the most exotic Eastern and Near Eastern languages, and (b) the Hungarians have a lower coefficient of second-language competence than any other civilized population except Americans. The shortage of competent Hungarian translators was a limiting factor in the size of the operation throughout its existence. Those who did come forward were used for long periods of time and were released only with great

reluctance. Despite this serious handicap, USSTRU, from its inception to its demise on 1 May, produced about 1,500 intelligence reports covering all fields of interest. Hundreds of documents with accompanying stories, books, and other articles of possible future operational usefulness also were acquired.

The record keeping for the Hungarians was undertaken by CIA, under its responsibility for the exploitation of all private sources in the US. Because many of the sources were not available for any sort of an interview at the camp, many had their interviews shortened by resettlement opportunities; and because qualified experts were not available in all fields at all times, it was necessary to compile full records on the sources so that they might be located at a later date. Because of the confusion inherently attending the whole program, the job of compiling the records involved scooping up all available piles of paper not only from the intelligence components but also from all of the agencies participating in the resettlement program. Then followed many hours of coding, recording, sorting, discarding, and requesting bits and pieces of data to fill the gaps. The resulting compilation proved of great use not only to all components of the intelligence community but, also on a number of occasions, to other Government agencies. By utilizing these records and its complete field force, supplemented by Air Force and Army units, CIA produced almost 3,000 reports by 1 September and has many more to come. This part of the collection operation faced many of the difficulties encountered at Camp Kilmer, with some new ones added.

Principal among these was the fact that the Hungarians, finding themselves free to move about as they pleased, changed locations with amazing frequency and rapidity without bothering in many cases to comply with the US regulations which require that aliens register changes of address with the Bureau of Immigration and Naturalization. Many field collectors had the disillusioning experience of tracing a Hungarian refugee believed to have potential for giving worthwhile information only to find after knocking on many doors that the source had considerably overstated his experience and qualifications.

The total result of the effort seemed to be that the overwhelming majority of the gaps in intelligence information on prerevolutionary Hungary were filled. When the intelligence analysts are able to collate and digest the mountain of infor-

mation resulting from the program, the records and facilities available should enable the collectors to fill all but a minuscule number of gaps. In addition the many intelligence officers who participated in the interviewing gained not only experience in the techniques involved but also a certain area familiarity. It would be impossible for an interested, informed person to talk to about forty or fifty Hungarians from all walks of life for a total of about 200 hours without acquiring a useful knowledge of the country and the people. When you add the thousands of reports and items to the training and area familiarization and divide it by the cost (Army food and quarters were provided, and no additional personnel were hired) you find that the intelligence community has made a bargain purchase. The Hungarian exploitation effort, American domestic style, will be a source of example and anecdote for some time to come.

PAPER MILLS AND FABRICATION

Stephen M. Arness

The paper mill and fabrication problem has appeared in many forms including outright fabrication, the sale of pseudo-intelligence, false confirmation, and multiple distribution of both valid and false information, as well as organized deception by foreign governments.

US intelligence agencies as well as all Free World intelligence agencies have been flooded with such information. It was estimated in 1952 that more than half of all the material received on several countries of greatest intelligence interest fell into these categories. US estimates were thus endangered and American intelligence efforts have been needlessly dissipated.

Multiple dissemination by paper mills operated by exiles from the Soviet Bloc cuts particularly deeply into the professional manpower resources of all agencies. Working independently of each other, American intelligence agencies were slow in developing a mechanism for benefiting methodically from their common experience in order to remedy this situation.

Paper mills are defined as intelligence sources whose chief aim is the maximum dissemination of their product. Their purpose is usually to promote special emigre-political causes while incidentally financing emigre-political organizations. The information thus conveyed consists of a mixture of valid information, overt material, propaganda, and fabrication. Its bulk, form, and obscure origin frequently preclude successful analysis and evaluation.

Fabricators are individuals or groups who, without genuine agent resources, invent their information or inflate it on the basis of overt news for personal gain or a political purpose.

The line between the two categories, in many cases, is difficult to draw.

Competent fabrication has defied recognition on the part of analysts and evaluators. Well-planned deception or provocation is apt to prove undetectable by analytical processes. It cannot be assumed, therefore, that more than a fraction of the number of actually existing cases in these categories have been identified. The established professional competence of the

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Soviet intelligence services coupled with their known preoccupation with deception and provocation — or, as they term it, “disinformation” — forcibly points up the danger which paper mills and fabricators represent to the US intelligence community.

This essay is primarily intended to call attention to the nature of this danger and to suggest the necessity of remedial action which may in time make the deception weapon less effective in the hands of the adversary and reduce his opportunity for employing it.

US intelligence-gathering agencies have spared neither manpower nor funds to close the gap between their information requirements and their knowledge of the Soviet Bloc. Groups of exiles from all target countries recognized very early that this situation offered them vast opportunities for political and personal advantage. Their intelligence representatives were well aware of the multiplicity of American agencies uncritically accepting all information offered, and even outbidding one another for intelligence sources. Moreover, their own experience often proved to them that American agencies did not fully coordinate their efforts, nor effectively cooperate to expose fraud.

Satellite politicians in exile knew that they could not return to power in their homelands except in the wake of war and Western victory. The liberal monetary remuneration offered by Western intelligence agencies for information from behind the Iron Curtain offered them a ready-made opportunity to remain alive and to preserve a political organization by peddling alleged intelligence. Careful operational analysis demonstrated that few, if any, emigre organizations had valid and unique intelligence assets; they lacked primarily the technical communications and documentation facilities for continuous contact with the homeland. Despite this, the unfortunate fiction persisted that such organizations had undefined special means of obtaining intelligence.

In many cases exile leaders neither understood nor respected the basic premise of US policy not to engage in war unless attacked. Their “intelligence” production, true, embroidered, or false, was inevitably used to influence US policy in the direction of hostility to the Soviet Bloc and to satisfy the ambitions of political pressure groups.

To state the obvious: each exile group, as each sovereign country, used the weapons at its command in its self-interest, enlightened or otherwise. Emigre groups considered intelligence production a weapon to be so used. Yet the record of US dealings with them shows that in case after case it ignored the fact that the satisfaction of US intelligence needs was clearly secondary to their own political interests. One effect of the cry-wolf policy on the part of the emigres and the recognition of their efforts to mislead is that one of their reports may be ignored.

Immediately after the war, several exile groups had manpower assets behind the Iron Curtain. Hasty, uncoordinated, and totally insecure operational use of these assets by both emigre groups and Free World intelligence agencies permitted the Communist security services to identify and destroy or to use them. Initial failure in the West to recognize the ruthlessness and efficacy of the Soviet-type police state contributed to this process which, generally speaking, was completed by 1950.

In view of this, it became apparent that nothing could be achieved by further uncontrolled subsidies to exile groups. Assertion of operational control by US intelligence officers through financial or other means, it could be expected, would normally be resented and sabotaged by such groups as it would strike at the roots of their political purposes. Generally, it was found advisable not to deal exclusively with the political leadership, but to take advantage of dissidence within the groups and to make it plain that intelligence production on our terms was valued more highly than the leaders' political cooperation. The leaders, finding personal control of their groups effectively endangered, then were apt to come to terms.

This strategy was followed increasingly in those operations involving Satellite exile groups with which CIA had contact. However, unless all intelligence agencies also recognize these principles and effectively suppress extraneous, uncoordinated aid to these groups, the uncontrolled information-peddling pattern will certainly persist or recur.

The fact that substantial funds for intelligence procurement have been available to numerous agencies may actually be a handicap. Exile groups and individual intelligence peddlers

assume that cost is no object to US intelligence personnel. Innumerable instances are on record in which payment for both good and bad information was wholly out of proportion to its true value. US financial liberality and competitive bidding among agencies has led to inflation in the intelligence market. Quality intelligence is seldom to be found in pieces of paper upon which a peddler has placed a price tag.

Virtually all outright fabrication cases can be attributed primarily to disregard for factors such as the following:

- a. Control of agents should include their direct financial dependence upon the intelligence officers handling them.
- b. Salaries of agents and sub-agents should be based upon sound estimates of actual living costs in indigenous terms, and exceed these only moderately. Excessive personal compensation, particularly when it is used to encourage volume of production, is a common cause of padding and fabrication.
- c. A portion of the agents' earnings should be withheld in special blocked accounts until their services are satisfactorily completed.
- d. Unless the use of funds available to agents for operational expenditures is closely controlled, security breaches or the purchase of embroidered and fabricated material will result.
- e. Subsidies to foreign intelligence services and groups must be carefully watched to prevent financing by them of recognized paper mill operators and fabricators.

US intelligence agencies abroad have reacted in various ways to the problem of uncoordinated spending on intelligence procurement, provided they were aware of it. Local coordination on a varying scale has taken place spontaneously in some areas. In the past some CIA field stations, concentrating their available manpower on procuring good information, paid no attention to US competitors in the field; others treated the problem as one of counterespionage. For the most part, however, efforts have been made to establish the origin of all information from the area, regardless of the agency purchasing it. In some instances the attendant waste of professional manpower overseas has been prodigious. It is estimated, for example, that one-third of CIA's intelligence officers in Austria were committed during June 1951 to the detection and neutralization of fabricators and paper mills.

The Communist concept of intelligence operations, patterned on the Soviet model, embraces a much broader field than does the Anglo-American. Far from being limited to seeking information through clandestine operations, it includes within the scope of "state security" a great variety of tasks designed to maintain the Communist Party in power and suppress all opposition. This means that all activity which can be construed as even critical of the state becomes a priority intelligence target.

The Communist security services accordingly make every effort to penetrate and control emigre movements abroad which may endanger their regime. This is not a difficult task. Emigre groups have operated openly in the West with little regard for security, and normally have admitted as members anyone who voices his anti-Communism strongly enough to be heard and who cannot be positively identified as a Communist agent. These two facts — that penetration and control of the opposition abroad are among the most important Soviet and Satellite intelligence tasks, and that they are so easily accomplished — lead to the assumption that emigre groups can keep only few secrets from the Soviet and Satellite governments, and that Soviet and Satellite agents may be high in the councils of such organizations.

There can be no reasonable doubt, furthermore, that Soviet and Satellite intelligence services have had the same easy access to the bulk of the emigre "intelligence" product as we do. It follows that Soviet intelligence analysts are apt to have a grasp of the extent of US information on the Soviet Bloc procured from such sources. They are thus able to base their deception planning on a thorough knowledge both of US intelligence procurement methods through exile groups and of much of the information in US hands against which deception is likely to be checked.

The lengths to which the Soviet Government will go in keeping track of emigre activities can best be illustrated by an historic case. During the nineteen twenties and thirties, in France, Soviet Intelligence obtained control of the Ligne Interieure, an "elite secret group" within the strongest Russian emigre organization of the day, the General Russian Military Union (ROVS). The Ligne Interieure had been designed by the ROVS for the centralization and political control of Rus-

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sian emigre groups, especially those of military usefulness. This aim naturally appealed to most White Russian emigres; however, since the Ligne Interieure was under Soviet control, it simultaneously served the purpose of making virtually the whole White Russian emigration subject to Soviet inspection and manipulation. In 1935 this Soviet control was exposed when the head of the Ligne Interieure, the Soviet agent General Skoblin, was discovered to have organized the kidnapping of General Yevgeni Miller, then head of the ROVS. His intention had been to replace Miller with a Soviet-controlled substitute. In subsequent investigations the background of the Soviet conspiracy outlined above was uncovered in detail.

These considerations should not lead to an automatic assumption that information received from emigre groups is planned Soviet deception or provocation. In most cases there is no substantial evidence that the originators of fabrication were, or are, agents of the Soviets, that the material has been supplied to them by Soviet intelligence, or that it constitutes Soviet deception. On the other hand, it is known that the Soviets are masters of deception and provocation and are willing to accept extraordinary sacrifices in terms of true information passed, in order to make deception stick at the proper moment. This leads to the conclusion that the Soviets may be using the present to digest their information and to develop potential deception channels and materials, reserving deception operations for moments and circumstances of their own choosing.

The theory that analysts in Washington are in a position to detect deception or fabrication rests on the assumption that they have verified material at hand against which they can measure their reports. Under the pressure of the volume of invalid material they must process, with little verified "control" material to go by, evaluators must rely on their personal skill and instinct. Their judgment is thus increasingly subject to human error. On the whole, analysis alone, whether on a high or low level in US intelligence, has been unable to break fabrication or deception cases except when the material lacked quality. Evaluators are handicapped not only by their ignorance of the operational circumstances under which the information is procured, but by the amount of processing and re-processing to which it is subjected before it reaches them. Translations,

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revisions, and summaries of spurious information frequently eliminate the flaws which might allow an analyst to detect a fraud in the original. It is the lesson of experience that fabrication and multiple false confirmation can be detected only by the method of operational investigation of the source and transmission channels, combined with reports analysis.

There can be no doubt that the Soviets are fully capable of planting information in our intelligence channels which has all the earmarks of being genuine. Only by careful scrutiny and cross-checking of the channels through which such deception material has been forwarded can the danger be reduced.

Unfortunately the following doctrines, which are fallacious and detrimental to the US intelligence effort, are still widespread among intelligence personnel:

- a. That intelligence agents of all nationalities are entitled to keep secret from their US intelligence officers the identities, antecedents, methods of operation, and means of access to information produced, of their subsources.
- b. That it is the mission of intelligence officers in the field to procure information without a determined attempt to ascertain its origin, leaving it to the experts in Washington to judge its validity.
- c. That overseas sources are in danger of compromise if identities are revealed to other agencies of the US Government which were established, trained, and equipped to protect such information properly.

The last mentioned concept fostered resistance among intelligence officers of various government agencies which prevented a long overdue exchange of information on fabricators and paper mills. As a result, an excessive amount of professional manpower had to be devoted to costly overseas investigation, where simple headquarters coordination of suspect sources would have revealed duplication or fraud.

The steady concentration of US intelligence agencies on military targets in the Soviet Bloc, and the relatively small influx after 1946 of knowledgeable new sources, have tended to solidify the intelligence market. Since 1946, in many areas, agencies of the Government have been dealing with identical intelligence sources. This makes a systematic program of centralized registration of sources both necessary and profitable.

Editor's Note

The views developed in this paper were first expressed early in 1952 when the menace to the intelligence community presented by paper peddlers of various types was at its height.

Since then steps taken under the authority of the IAC give promise of achieving a coordinated solution to this problem by the US intelligence community.

LOST ORDER, LOST CAUSE

C. Bowie Millican, Robert M. Gelman, and Thomas A. Stanhope

The month of September 1862 began as the low point of the American Civil War for the North. The South, having repeatedly proved its superiority on the field of battle, was demonstrating a spirit of resistance which boded at least an ultimate stalemate and the separation of the former United States into two rival nations. Before the month of September ended, the eventual defeat of the South became inevitable.

In August, Robert E. Lee had smashed and routed the Federal forces under John Pope at the Second Battle of Bull Run,¹ leaving a legacy of hysteria to the Federal Government. Henry W. Halleck, the recently appointed general-in-chief in command of all army operations, was stunned by the suddenness and magnitude of the defeat. Edwin M. Stanton, Secretary of War, was busy with nervous preparations for the fall of Washington. To prevent arms and ammunition from falling into the hands of the enemy, he gave orders to ship the arsenal to New York. In the War Department, important papers were placed in bundles which could be carried by men on foot or on horseback. Gunboats were ordered to stand by on the Potomac River, and a steamer was held in readiness to evacuate President Abraham Lincoln and his Cabinet.

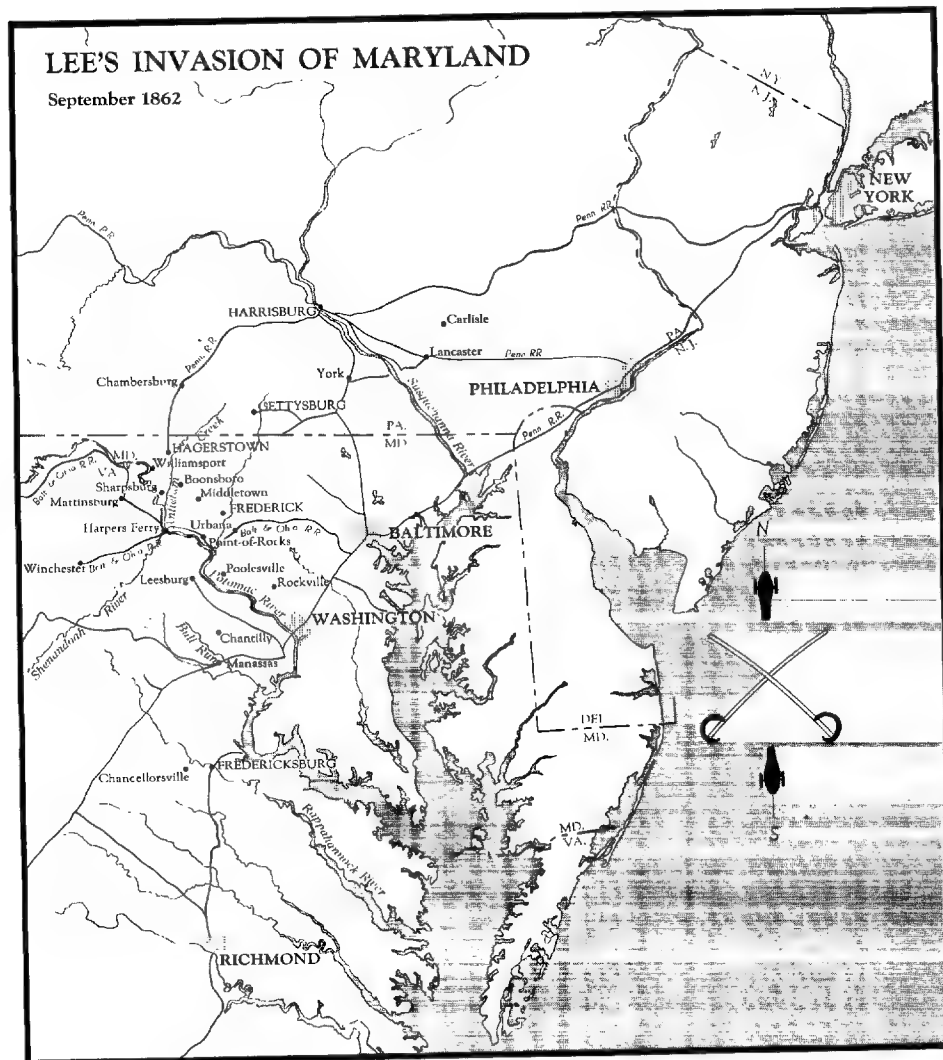
Other areas of the United States, although not under the guns of Lee's army, were no less apprehensive than the capital. In eastern Pennsylvania, Governor Andrew Gregg Curtin begged President Lincoln for a minimum of 80,000 troops to defend Philadelphia against the 120,000 to 190,000 rebels which he believed were being massed in Maryland for an invasion of Pennsylvania. In western Pennsylvania, there were fears that Braxton Bragg somehow was going to take his western Confederate army across impassable mountains to join with Lee. In Maryland, where memories of the April 1861 riots in Baltimore against Federal soldiers were still clear and bitter, there was widespread apprehension of a rebel uprising attended by the loss of the state and the isolation of Washington.

¹ Important places in the eastern United States mentioned in the text are shown on the accompanying map.

In New York and Indiana, potential Copperhead plots and sabotage terrorized both official and public opinion. Confederate armies in Kentucky under Bragg had taken Lexington and were threatening Louisville and Cincinnati, where martial law was proclaimed. In each of these places the citizens dug trenches and slept in terror when they did not actually flee to the countryside. A third major Confederate army under Earl Van Dorn, somewhere in Mississippi, conjured up additional nightmares for the frightened, who visualized this army sweeping through or around Ulysses S. Grant and eventually overrunning the western areas of the Union.

Among the European powers, sentiment was building toward mediation in the war and recognition of the Confederacy, if not toward actual intervention on its behalf. The British were provoked to these attitudes by the shortage of cotton for their textile mills, resulting in unemployment and deprivation for hundreds of thousands of workers; by a preference of the British nobility for the aristocratic, Anglo-Saxon South over the heterogeneous, "mongrelized" North; by the desire of the British Government to see two rival pygmies instead of a single united giant on the Canadian frontier; and by general national anger toward supposedly hostile Northern actions such as the blockade and the removal by a Yankee warship of two Confederate agents from a British mail steamer, the *Trent*. Subtle propaganda by Confederate agents in Great Britain provided a catalyst for these sentiments, and the rout of the Federal troops at Second Bull Run fired the retort. Recognition of the Confederacy by Her Majesty's Government and a negotiated peace on the basis of Southern independence loomed as a startling reality to the North in the shambles of its defeated army. Britain would have been followed by Napoleon III of France, who had the assurance of Confederate support and eventual recognition of any French conquests in Mexico in return for his recognition of the Confederacy — which had, in effect, already repudiated the Monroe Doctrine.

The South responded to news of the great victory at Second Bull Run with a demand that the war now be carried into Yankee territory. Newspapers in every Southern city spoke for their readers when they clamored for an immediate invasion of the North. Sentiments similar to those stirring the average Southern citizen also motivated the leaders of the Confederacy.



Lee agreed that Southern military success had put the Confederacy in a position to state its political objectives leading to an honorable peace, but he still felt that one more victory over the Federal troops — and this one a victory north of the Potomac — would so clearly prove the strength of the Confederate position that the North must accede to any demand for peace. Such a victory might well affect the coming Congressional elections in the North as well as influence the wavering British and French Governments to recognize Southern independence. An offer of peace after a great victory would be considered a magnanimous gesture by a victorious power rather than a sign of weakness by a frightened bureaucracy.

To achieve these political ends, Lee had to gain another battlefield victory over the Federals, and a major objective of an invasion of the North was therefore the Federal Army of the Potomac itself. By taking the initiative, Lee could draw his opponents, far less skillful than he, whoever they might be, into a war of maneuver in which he could win on a field and at a time of his choosing. As another major objective of his invasion, Lee also intended to seize or to destroy the Pennsylvania Railroad bridge over the Susquehanna River at Harrisburg, Pennsylvania. The seizure or the destruction of this bridge would sever the connecting artery between Washington and the West. The only other through connection to the West was at the periphery by way of the Hudson River and the Great Lakes.

Lee had the capability of attaining his objectives. With a victorious, battle-tested army under successful veteran commanders, Lee would be able to defeat the Federals if he were permitted to select the terms of reference for the battle as he already had done at Second Bull Run and was to do again later at Fredericksburg and Chancellorsville. Lee also would be able to destroy the railroad bridge at Harrisburg if he reached it without having drawn the Federals into battle or to seize the bridge if he reached it after a victorious battle.

Although his army was relatively small, Lee divided it into several parts, with the Federal garrisons at Harpers Ferry and Martinsburg in the Shenandoah Valley as targets for three units. Two other units were to proceed toward Boonsboro and Hagerstown. In his Special Orders 191 of 9 September 1862, Lee drew up his order of march and made his troop dispositions. Each of the key commanders mentioned in the order was sent

a copy of the order. James ("Pete") Longstreet carefully read his copy and chewed it — "as some persons use a little cut of tobacco." John G. Walker pinned his copy to the inside of his jacket. Thomas J. ("Stonewall") Jackson meticulously burned his copy.

There was a certain confusion in Jackson's mind as to whether Daniel Harvey Hill was still under his command or directly under Lee. To be certain that Hill received a copy of Special Orders 191 (the Army of Northern Virginia had not yet been divided into corps), Jackson, in his own hand, sent Hill a copy. Hill admitted receiving this copy. Unfortunately, Lee, considering Hill no longer under Jackson but directly under himself, also sent Hill a copy. Hill claimed that he never received this copy.

On Saturday, 13 September, the hastily reorganized Federal Army of the Potomac under the command of George B. McClellan moved into Frederick and set up camp on the outskirts of the town. Colonel Silas Colgrove, the commander of the 27th Indiana Volunteers, Third Brigade, First Division, Twelfth Army Corps, ordered his men to stack arms in the same area which had previously been occupied by the men under the command of Daniel Harvey Hill.

While resting in this area, Private Barton W. Mitchell and Sergeant John M. Bloss, both of the 27th Indiana, found a copy of Lee's Special Orders 191 in a paper wrapped around three cigars. The order was authenticated by Colonel Samuel E. Pitman, First Division Adjutant-General, who recognized the signature of Lee's Assistant Adjutant-General as that of Colonel Robert H. Chilton, with whom Pitman had served in Detroit. The order then was brought to McClellan, who set off to destroy Lee in detail.

McClellan, dilatory by nature and convinced by his faulty intelligence that Lee had an army about 50 percent larger than the Army of the Potomac, was not likely to have attacked Lee. Even with Lee's orders before him — orders dividing Lee's army — McClellan inched cautiously forward.

Lee, informed of the loss of the copy of Special Orders 191 that he had sent to Daniel Harvey Hill, did his best to reassemble quickly his scattered units to present a united front to the Federals, and on Wednesday, 17 September 1862, the Battle of Antietam took place. Lee, forced to fight on the defensive for

the first time during the war and incapable of maneuver, was able to stop the Federal attack only with great difficulty. On 19 September, Lee withdrew into Virginia, and the North was free of the invader.

The railroad bridge at Harrisburg was not cut, and the North was able to maintain its fundamental east-west link. Maryland, eager to follow a winner, not only did not secede but even went so far as to increase its effort on behalf of the Union. With Maryland remaining loyal, Washington was neither surrounded nor isolated, and its Fifth Column remained nervously underground. The fear of invasion among Northern states proved to be groundless, and the governors of these states rather than demanding troops from Washington to defend themselves, provided troops, albeit reluctantly, to the Union army. With substantial reinforcements from the eastern states available, the Union was able to send Western recruits to Don Carlos Buell and Grant to exploit their victories at Perryville, Kentucky, and at Corinth, Mississippi.

The Copperhead movement, which needed the impetus that a Southern victory north of the Potomac could give, never received this impetus and gradually lost strength as the war progressed. Even at the polls this movement proved to be weak as Lincoln's Republicans swept the Congressional elections of 1862 to remain in power.

Lincoln, who had resolved upon the Emancipation Proclamation as a military, political, and psychological measure necessary to insure the ultimate conquest of the Confederacy by the Union, leaped upon Antietam as the victory which he needed to give meaning to the Proclamation. Even though the Proclamation was a political gesture, in victory it seemed more idealistic — and realistic — than if it had followed a defeat on Northern territory. After a Union defeat the Proclamation would have seemed to be nothing more than the empty oratory of a beaten demagogue rather than the noble gesture of a confident leader.

The recognition which the South had expected from abroad was contingent upon a Confederate victory, and the Southern retreat from Maryland could hardly be construed as a victory even by the Confederacy's most sanguine European supporters. The retreat, in turn, led to second thoughts; second thoughts, to inaction; inaction, to continued nonrecognition — right

through to the end of the war. Lincoln's Emancipation Proclamation, moreover, swayed foreign public opinion to the North, which now seemed to stand for the oppressed rather than as the oppressor of a popular revolt.

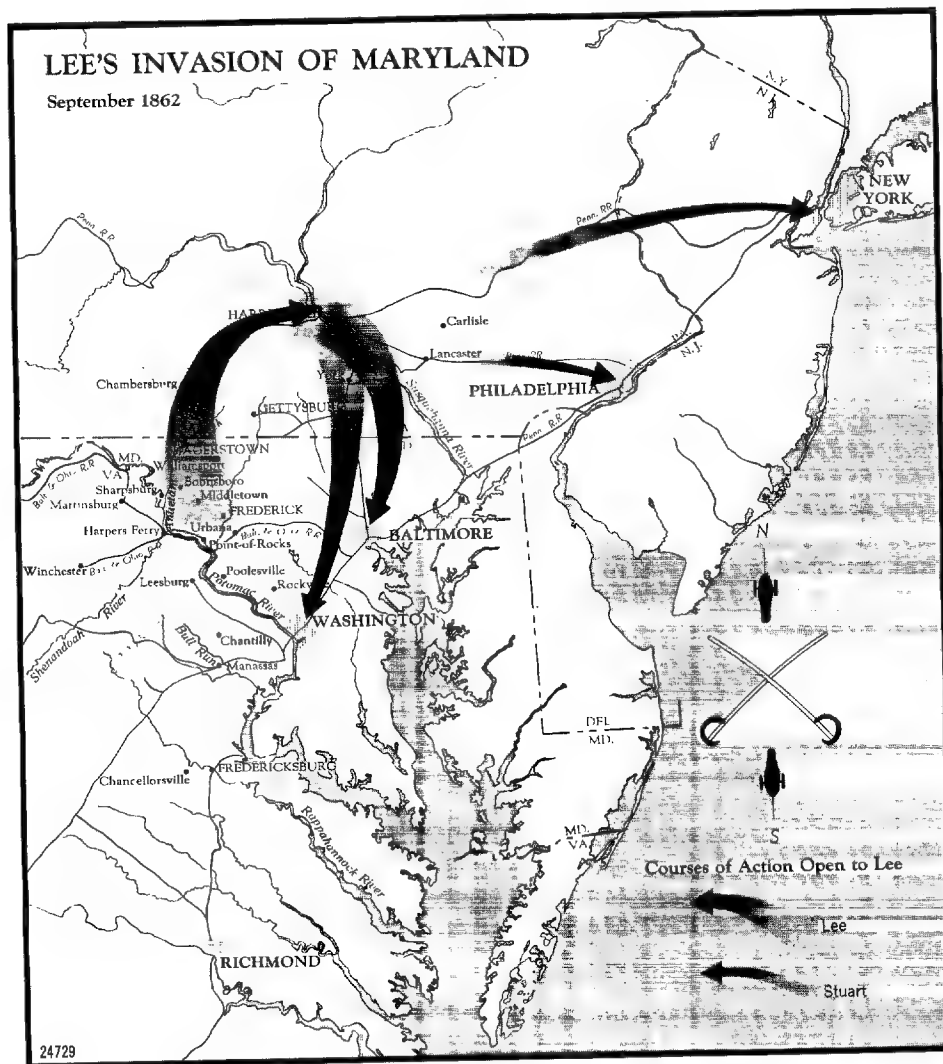
Finally, Southern hopes which had been raised to the heights with the victory at Second Bull Run and with the transfer of fighting from Southern to Northern soil ran the gamut to utter frustration in less than three weeks. Although the spirit of the South was as resolute after Antietam as before, a gnawing doubt now marched side by side with this spirit.

Lee unequivocally blamed the failure of the invasion of Maryland on the lost order. He defended the division of his army, pointing out the need to eliminate the threats to his lines of communications represented by Martinsburg and, particularly, Harpers Ferry. In addition, Jackson's investment of Harpers Ferry provided vast stores of the very treasures of food, clothing, and weapons which were some of the objectives of the invasion. At the very least, if McClellan had not obtained a copy of Lee's orders, Lee could have reunited his army long before the dilatory McClellan would have moved, and Lee could have re-equipped it with some of the hoard from Harpers Ferry and given his 10,000 or more stragglers time to rejoin his army. Thus refurbished, Lee could have gone on to Harrisburg, destroyed the bridge, and sought out McClellan.²

The Confederates held Harpers Ferry and had destroyed much of the Baltimore and Ohio Railroad, an important east-west link. Destruction of the railroad bridge at Harrisburg would have cut the east-west connection for Washington, Baltimore, and Philadelphia. Even if Lee had subsequently been defeated by McClellan — a most unlikely event on the basis of previous encounters between these generals — many months would have elapsed before the rail connection over the Susquehanna River could have been re-established. Reconstruction of the bridge from the heights over the river would have been, at the very least, a major engineering achievement.

The cumulative effects of a victory by Lee over McClellan in Maryland would have been devastating to the North. Lee could have moved on to Harrisburg and with his headquarters

² Courses of action open to Lee if McClellan had not gained possession of Special Orders 191 are shown on the map.



in the capital of Pennsylvania, astride the rail lines to Philadelphia, Baltimore, and Washington, would have menaced all three of these terrified metropolises. During Lee's second invasion of the North in 1863, Richard S. Ewell approached within three miles of Harrisburg before he was called back because of the chance encounter at Gettysburg. The panic of the Pennsylvania countryside at that time is a slight indication of what Confederate headquarters at Harrisburg might have caused — especially if Confederate cavalry under James E. B. ("Jeb") Stuart had been permitted to raid in the direction of Philadelphia and even New York.

If Lee had chosen to commit himself early rather than to wage psychological warfare against the three cities simultaneously, he might have marched directly from a victorious battlefield against Baltimore or Washington. The very Maryland farmers who watched impassively as Lee's half-starved tattereddemolitions poured across the Potomac might conservatively have estimated that a victory by Lee on Maryland soil looked dangerously like the beginning of the end of the war on Southern terms. The number of recruits whom Lee might have picked up in Maryland, under the band-wagon steamroller, would have increased sharply, thus augmenting even more an army in which straggling had suddenly disappeared. The strong secessionist tendencies indicated by Baltimore in April 1861 might have opened that city to Lee in 1862, permitting his entry against bare token resistance.

Washington, thus isolated by a secessionist Maryland and itself swarming with a devious, opportunistic Fifth Column, could hardly have remained the capital. Previously prepared evacuation plans might have moved the Government to Philadelphia or New York while Jefferson Davis, President of the Confederacy, graciously doling out merciful terms to a stunned city, rode triumphantly down Pennsylvania Avenue. Recognition, but no longer intervention, would have been inevitable. A triumphant South would have scorned intervention.

While Lee campaigned in the North, 20,000 recruits were assembled in Richmond for his army. A victorious Lee, gathering volunteers in Maryland, would hardly have needed these recruits. Bragg, however, pressing on Buell in Kentucky, could have used the recruits, and such reinforcements might well

have balanced the numbers in Bragg's favor, giving him the opportunity of making good his intention to install a Confederate governor at Frankfort, the capital of Kentucky.

The Federals in the West would have had to withdraw troops from wherever they were available to relieve Buell, thus taking pressure off Van Dorn in Mississippi and Tennessee. Van Dorn, for his part, then would have been free to attain whatever objectives his romantic mind could perceive.

Lee on the loose in the east and Bragg in the west could have provided direct military support to the Copperheads. The fall of Baltimore would have added political dynamite to the Copperhead movement and very likely would have resulted in armed uprisings in such widespread areas as Indiana and New York, accompanied by political defeat for the Republicans in the Congressional elections of 1862.

Lincoln, with defeat on the battlefield and at the polls a haunting reality, would hardly have dared to propose the Emancipation Proclamation. An independent Confederacy, badly in need of a labor force, might have maintained the institution of slavery until the increased use of the machine made slavery an expensive economic anachronism.

If secession had become an historical fact, Great Britain could have obtained the cotton that its textile mills needed and eventually could have established a successful partnership with the Confederate States of America. In such a partnership the agrarian cotton empire of the Confederacy with its raw materials would have complemented the manufacturing maritime empire that was Great Britain. The South, led by an aristocracy with a lineage as proud if not as old as Britain's nobility, could have been accepted as a peer and an ally by its British cousins.

The Yankees, on the contrary, swaggering industrialists and traders, with their eyes to the sea, by the very similarity of their economic interests could never be a partner or an ally of the British but must always be a rival against whom war might very well erupt. Finally, although the Union had an Anglo-Saxon heritage, it was a melting pot with many social customs alien to the British, who found Southern Anglo-Saxon homogeneity more palatable.

Confederate expansionism would eventually have tangled with Yankee imperialism, and a return war, fanned by interested third powers, might have completed the cycle, leaving both North and South physically and spiritually exhausted second-rate powers.

Napoleon III, having recognized the Confederacy, would have received a *carte blanche* from the South to pursue his conquest of Mexico. The North, defeated and confused, would have been able to do very little to prevent Napoleon from succeeding.

Tradition and a considerable body of opinion have held that Gettysburg, not Antietam, is the more nearly decisive battle and the turning point of the Civil War. However, the relative positions of the North and South at both these junctures in history clearly seem to point up September 1862 as a period far more critical for the North and far more favorable for the South than July 1863.

By the spring of 1863 the Union had begun to perceive its true strategic objective in the war, not as the capture of Richmond, the Southern capital, but rather as the destruction of the Confederacy through the tightening of a ring of death and devastation about the beleaguered South. Southern arms in the West had given ground slowly but inexorably, until in one harrowing 24-hour period word came almost simultaneously of the surrender of Vicksburg and the abandonment of Chattanooga. The Mississippi Valley was lost, the Mississippi River opened to Northern commerce from St. Paul to the Gulf of Mexico, the Confederacy west of the river irretrievably written off, and most of Tennessee held in Federal hands. After such losses as these, of what small import was Lee's check at Gettysburg — a check which lost not one square inch of Southern territory nor opened one single path of invasion to the North?

But what if Lee had won at Gettysburg? His capabilities, still impressive, would have been offset by new limitations. Although Lee's army apparently was in better physical condition than in its first invasion, being better clothed and equipped and having counterbalanced Antietam with convincing victories at Fredericksburg and Chancellorsville, the source of its manpower was running low and the reservoir which replenished emptied ranks was dried up. Reserves such as those

which awaited Lee in Richmond after Antietam were no longer procurable, and the will of his gallant veterans to fight and to die was being sapped. Mere numbers, though larger than in 1862, were minus one who was worth 10,000 — Jackson was no more.

No matter how overwhelmingly Lee might have won at Gettysburg — and he would have had to pay a heavy price in lives for any victory — he could hardly have achieved more than local success. The resiliency which the Federals showed in bouncing back from crushing defeats at Fredericksburg and Chancellorsville, on enemy soil, could hardly have been expected to be less than what they would have shown on their home soil after a crushing defeat at Gettysburg.

For Lee to have exploited a victory at Gettysburg would have meant his fighting and winning two or three more Gettysburgs against the additional two or three large armies which the Union would have been capable of throwing against his depleted ranks. For the Confederacy to seek reinforcements for Lee from the West would have disastrously weakened an already exposed soft side and would have left a victorious Lee in Pennsylvania with a hinterland of the South Atlantic States and nothing more — a successful invader without a home base.

By the time of Gettysburg the Congressional elections had already been won by the Republicans. The Copperhead movement was losing momentum, and key Copperheads were in jail or on their way to jail. The secessionist tendencies exhibited by Maryland in 1861 were gone, and the Pennsylvania territory in which Lee was operating in 1863 was hostile to him, win or lose. Lee's lines of communications were long, thin, and vulnerable to the improved tactics and leadership of the Federal cavalry, which maintained a constant check on Lee's movements.

Finally, the recognition by foreign powers, which seemed so real and close when Lee invaded the North in 1862, was irrevocably lost by 1863. Napoleon III, in the process of setting up a puppet emperor in Mexico, remained eager to recognize the Confederacy. Great Britain, however, had lost interest, and Napoleon's clumsy efforts at coercing the British Government were confronted with a wave of sympathetic popular opinion for the side which had lined itself against slavery.

Although it is difficult to say whether the gallant Army of the Potomac, which sent Lee reeling back into Virginia, or the obscure little private who found the lost order played the greater part in dissolving Southern dreams of invasion, of success, of severing East from West, of recognition, and of changing the course of world history, one conclusion is clear: the intelligence information which precipitated the Battle of Antietam and set in motion forces which marked the turning point of the Civil War resulted in a different world from the one that might have been if the lost order had never been lost — and found.

CRITIQUES OF SOME RECENT BOOKS ON INTELLIGENCE

THE NEW CLASS — AN ANALYSIS OF THE COMMUNIST SYSTEM. By *Milovan Djilas*. (New York: F. A. Praeger. 1957. Pp. 214.)

The New Class, by Milovan Djilas, has been labeled as "The book that is shaking the Communist world." Critics and editorialists have been lavish in their praise. "The book that is a bomb" — "that most penetrating analysis of modern Communism" — "probably the most devastating anti-Communist document ever written" — "a manifesto marking the death throes of Communism" — these are some of the epithets encountered.

This review proposes to take a more sober approach and to examine particularly one aspect of the book which in the first eruption of enthusiasm has not yet been adequately explored. If Djilas' insights and formulations are valid, they should have an impact not only on "the Communist world" but also on ours, — the world of the intelligence and operations officer. The observations on this point are advanced not to provide final answers but, rather, to stimulate further questions and thoughts.

There is no doubt that the fundamental insights expressed by Djilas are valid. Djilas defines Communism as the most highly developed technique for the exercise of totalitarian power to appear in historical time.

Controlling the coercive apparatus, the mechanism of "nationalized" property, and the minds of the people ("ideology"), the Communist Party has evolved and degenerated into a "new class" of ruthless power holders and exploiters who conceal their self-interest behind a facade of long-term, idealistic objectives which are incapable of realization.

The most striking feature of Djilas' definition and exposition of Communism is its coincidence with the Western, non-Communist view. One need only compare the moving chapter "Tyranny over the Mind" in *The New Class* with the sharply analytical and thoughtful piece by Isaiah Berlin, "The Silence in Russian Culture,"¹ in order to realize this coincidence. As a matter of fact, Djilas is quite correct when he states, "Almost

¹ Foreign Affairs, Vol. 36, No. 1, October 1957.

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everything in this book has been expressed somewhere else, and in a different way." Notable among similar views "expressed somewhere else" are analyses made by western democratic socialists.

It may therefore be asked whether Djilas, in his supremely courageous act of writing and publishing abroad *The New Class*, was motivated by external influence (that is, Western views) or by internal (psychological) factors. A case, it is believed, can be made for the operative quality of both factors, and it may be claimed, somewhat paradoxically, that, whereas the Communist system triggered the psychological conflict within Djilas, the West furnished the ammunition. Djilas himself admits that he evolved from the position of Communism to the position of Democratic Socialism.

The book reveals some of the motivations underlying Djilas' acts. Djilas shows quite clearly his nostalgia for the spirit of the "revolutionary" period prior to the seizure of power in Yugoslavia and, as a matter of fact, elsewhere in the Communist movement. He also emphasizes his personal role in formulating the anti-Stalinist ideological positions of the Yugoslav Party subsequent to the break in 1948 and shows irritation over the fact that the Party bosses discarded his formulations after Stalin's death, in the course of the Soviet-Yugoslav rapprochement. By way of over-simplification, Djilas revolted not so much against the revolution per se but against a revolution which had grown fat. Further, he took the anti-Stalinist, anti-Soviet line more seriously than his colleagues, and, as so often had been the case of other defectors, fell out of step, unable and unwilling to readjust. Whereas the physical and intellectual courage displayed by Djilas are beyond doubt and disparagement, his case, from a psychological point of view, would appear to be one of unrequited love turned into violent though controlled and sublimated hate.

This interpretation is supported by the fact that the only truly "new" concept forwarded by Djilas' book is the concept of the "New Class." This concept, in the final analysis, is an explosion of the mind: it is an invective. Communist polemics, from Marx to Khrushchev, are richly interspersed with the righteous (or "scientific") fury of invective. Nevertheless, Djilas' formulation whereby the advocates and engineers of a classless society have become a new class of totalitarian ex-

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exploiters — more ruthless, degenerate, and self-seeking than any other class of exploiters in history — clearly is the strongest and most damaging invective ever hurled at Communism. It also happens to be self-evidently true, and is therefore, from a Communist point of view, unforgiveable.

The general validity of the book, then, need not be belabored. Nor should it be necessary to point out that the book, though evidently stemming from a personal, emotional crisis, is a calmly rational and systematic exposition of the Communist system. Nevertheless, the book's impact on Western non-Communist opinion has been somewhat sensationally enhanced by the fact that the author has been a Communist. Conversely, it is to be feared that the impact of the book on Communist opinion will be less spectacular than predicted by certain headlines. Communists, as a class, are still conditioned by discipline and indoctrination, and a majority of those who will be reached by the book (over the obstacles of external or self-imposed censorship) are likely to reject or discredit it as the work of an "imperialist agent." Such rejection should be anticipated on the part of those Free World Communists who, in contrast to Djilas, have had no first hand experience with Soviet or Bloc reality. Nevertheless, under the conditions of intellectual fermentation existing in the Bloc today, it may be presumed that Djilas' ideas will take root in the minds of a self-selected few there.

The recent case of a defected Chinese youth revealed that he ran into trouble with the Communist Party because he had criticized it for representing "vested interests." The concept of "vested interests" is certainly related to the concept of "the new class." Tenuous as such indications are, they point to a certain receptivity. Although certainly no single book can shatter the Communist world, Djilas' *The New Class* should strengthen the determination of Communists who by way of similar experience are reaching similar conclusions.

If the findings of *The New Class* must be considered valid and supported by the findings of the West, the question arises as to their applicability as guidance for our own work and the functioning of this organization and of the intelligence community as a whole. There are certain specific positions in the book which could indeed form the basis for a renewed discussion of intelligence as well as operational problems. Some of these

are discussed in the following paragraphs. A great many more could be developed.

In Djilas' view the essence of the Communist system automatically or naturally produces intrigues and struggle for power at the top. There should be little difficulty in accepting this view, particularly in the light of the events of June 1957 in the USSR.

If accepted, this view could and should have a bearing on the effort of the intelligence community to follow, understand, interpret, and anticipate power struggles and shifts. The effort would have to be implemented with two basic tools — intensive interpretative biographic research employing the meticulous methods of counterintelligence and, simultaneously, intensive exploitation of overt Bloc materials (press, magazines, books, and broadcasts) employing the method of comparative analysis and symbol interpretation.

One need only review the splendid volume on Soviet Personalities produced by the National Intelligence Survey to realize both the potentialities and shortcomings of current biographic research conducted by the intelligence community. The NIS volume on Soviet Personalities is a veritable gold mine insofar as indications of clique-connections and infighting in the Soviet elite are concerned. However, this admirable work is outdated (it was published in 1954) and does not contain biographies on dead Soviet leaders, such as Zhdanov and Voznesenskiy, whose connections with the living are of current significance. The admirable State Department publication "Soviet Political Leaders" fills the gap only to a certain extent because it is merely an index to current positions of Soviet leaders.

Basic biographic intelligence produced by the NIS on the leaders of China, Poland, and Yugoslavia, for instance, dates back to 1951, 1952, and 1953 respectively. There may be perfectly valid reasons for such a lag in the production of basic biographic intelligence, and there are certainly supplementary projects in process and knowledgeable individuals scattered throughout the intelligence community. Nevertheless, the Djilas theses may serve an extremely useful purpose in focusing attention on some of our own problems relating to biographic and interpretative intelligence production on the Soviet and Bloc elite — especially the problem of concentration and centralization.

In this context it is felt that the systematic study of the Soviet and Bloc elite need no longer be declared out of bounds as the area of the unknowable. Myron Rush, in his brilliant study "Khrushchev and the Stalin Succession" (Rand Corporation, March 1957), has clearly demonstrated the validity of his method — exploitation of the Soviet press and literature through painstaking comparative analysis of the almost hieroglyphic symbols and "signals" deliberately employed in Soviet communications. By March 1957, Myron Rush had accurately described the tense situation within the Soviet elite which was to erupt in June.

The Djilas thesis should provide a powerful stimulus for reviewing the practices and methods prevailing within the intelligence community concerning the study of Soviet and Bloc personalities. Needless to say, the outcome of such review would automatically affect collection and other operational efforts.

In the field of psychological warfare a closer examination of Djilas' views on Communism's vulnerabilities may lead to a renewed concentration of fire power. Djilas does not deal directly with psychological or political warfare, but it is fairly evident from his thoughts scattered through the book that he has considered five broad appeals and targets in the Bloc.

First, he maintains that elucidation and exposition of the actual class relationships prevailing in the Bloc would have a liberating effect. "If the character of property and social relationships brought about by the Communist revolution is strengthened and defined, the prospects for liberation of the people from such relationships become more realistic. *If the people are not conscious of the nature of social relationships in which they live, or if they do not see a way in which they can alter them, their struggle cannot have any prospect of success.*" (Italics supplied.) This approach would be Communist technique in reverse. Just as Communist propaganda "unmasks" capitalism, Djilas here appears to advocate the unmasking of the class monopoly of the Communist Party.

Second, he appears to favor maintenance of pressure for the rights of workers to share in the profitmaking process. "To divest Communists of their ownership rights would be to abolish them as a class. To compel them to relinquish their other social powers, so that workers may participate in sharing the

profits of their world — which capitalists have had to permit as a result of strikes and parliamentary action — would mean that Communists were being deprived of their monopoly over property, ideology, and government. This would be the beginning of democracy and freedom in Communism, the end of Communist monopolism and totalitarianism.”

Djilas subsumes to this appeal “a demand for freedom — based on the position that capital goods produced by the nation can be managed more efficiently by society than by private monopoly or a private owner, and consequently should actually be in the hands or under control of society exercised through its freely elected representatives” In other words, Djilas favors an appeal based on the fact that “totalitarianism is unnecessary as a means of protecting the workers from exploitation”²

Third, Djilas holds that the monopoly position of the Communist Party can be shaken by exposing its inherent conflict with the ideological and legal facade of the system. “The contradiction between the new class’s real ownership position and its legal position can furnish the basic reason for criticism. This contradiction has within it the ability not only to incite others but also to corrode the class’s own ranks, since privileges are actually enjoyed by only a few The fact that this contradiction is so obvious has been the reason for the changes made by the new class, especially in so-called liberalization and decentralization The groundwork for reforms is laid when the discrepancy mentioned above becomes public” In this context, Djilas also favors pressure for an “independent judiciary and the rule of law” which “would inevitably make it possible for an opposition to appear.”

Fourth, he opens a perspective on special appeals to the military when he claims “a military dictatorship in a Communist system would denote great progress.” Although he acknowledges that such a development would occur only under special circumstances, he feels “. . . it would initially be a form of party dictatorship, or it would have to conceal itself in the Party. But this would inevitably lead to a change in the entire system.”

² Djilas Milovan “The Storm in Eastern Europe,” *The New Leader*, 19 November 1956.

Fifth, Djilas emphasizes the potency of the appeal to the truly national sentiments and aspirations of the peoples subjugated by the Communists within and without the USSR. "The various nations, each of which once had its own form and color, its own history and hopes, stand virtually still now, gray and languid beneath the all-powerful, all-knowing, and essentially non-national oligarchies." But "just as personality, various social classes, and ideas still live, so do the nations still live; they function; they struggle against despotism; and they preserve their distinctive features undestroyed."

A more detailed and practical analysis of Djilas' explicit or implicit positions on psychological warfare lies beyond the scope of this review. Djilas' emphasis on certain appeals stems from his basic faith in the efficacy of pressure of popular opinion within the Bloc under current conditions, and would appear to merit close study.

To sum up, *The New Class* is not a book that can be expected — magically — to "shake the Communist world." Its broad effect on Communists cannot be accurately gauged. Nor is *The New Class* a perfect book. Djilas still has certain characteristics of the Marxist-Communist: a tendency to discover fundamental "laws of society"; a predilection for declaring certain trends to be "inevitable"; a hankering for a supreme, almost monolithic — although non-Communist — world outlook which would embrace all the answers to all the questions.

Nevertheless, if it were to accomplish nothing else but a determination on our part to sharpen our own operational tools, it will have served an eminently good purpose.

LENA MARKS

THE SOVIET SECRET POLICE. By *Simon Wolin*¹ and *Robert M. Slusser*.² (New York: F. A. Praeger. 1957. Pp. 408.)

It should not be necessary by now to come to the defense of that rather forlorn figure, the outsider who has the temerity to write on intelligence. With a decade of experience and reflection behind us and the work of our predecessors to draw upon, we should by now have achieved breadth of view sufficient to appreciate the contribution that the amateur or the independent scholar — the man who does not earn his living at intelligence work — can make to our discipline. Instead, I fear, we have grown nearsighted from looking down our noses at those who invade our field without benefit of classified data.

The word "professional" recently has gained a prominent place in our vocabulary. It reflects, I believe, a growing self-consciousness, a developing tradition, an understanding that in its broadest sense intelligence is an intellectual discipline. Intelligence, however, is a Trappist-like profession. Those who enter it take vows of silence. All of us understand the peculiar need for a limitation upon our right to professional self-expression and freely accept it, but this barrier also can bring frustration and an unconscious rejection of the contribution made by amateurs who are not thus hampered. Perhaps the best works on intelligence are written by these same amateurs simply because our rules of the game do not permit the professional to compete.

"Professionalism" easily becomes a refuge for the professional intelligence man. He falls back on his (he believes) superior knowledge of tradecraft and techniques or on his training; he is proud that he is really "witting." He manages

¹ Simon Wolin is the brother of David J. Dallin, the author of *Soviet Espionage*. Now in his sixties, Wolin was educated in Russian and European universities. For a time he was associate editor of the *New Leader*, and later did research for US government agencies. At the present time he is a free lance writer.

² Robert M. Slusser attended the University of Chicago and the Russian Institute at Columbia. He served a short time as Associate Director of the Research Program on the USSR, an affiliate of the East European Fund, Inc., which was financed by the Ford Foundation. Slusser is now employed at the Hoover Library for War, Peace and Revolution. He has edited *Soviet Economic Policy in Post-War Germany*, a collection of papers by former Soviet officials.

to forget that a professional worth his salt must pause occasionally to gain a broad and detached view of his discipline.

It is precisely this detached view, unclouded by our day-to-day problems, that the amateur or scholar sometimes can give us.

Every work on contemporary intelligence and/or for security organizations, be it amateur or scholarly, is vulnerable to professional criticism — at least on the narrow ground of scope and accuracy of data. With rare exceptions the outside writer is hobbled by limitations that are the converse of our own: he is denied access to information. Even when the outsider relies on the personal experiences of former members and victims of the service, as Wolin and Slusser have largely done, the professional will often judge his work to be superficial, out of date, or lacking in precision. The professional who loses himself in the maze of daily problems and decisions will soon discover, however, that classified information is his only remaining stock in trade! He has lost the ability to measure the broad sweep of his subject.

If he is wise, the amateur does not compete with the professional on the latter's home ground. Instead, he escapes to a wider field where he can more than hold his own — broad and basic questions of philosophy and policy or the presentation of a service in terms of its historical development.

This, I believe, is what Wolin and Slusser seek to do, at least in part, in their collection of essays on Soviet state security. The fact that their success is less than complete does not invalidate my thesis. Their work is significant, indeed, to the extent that it interprets the historical development and defines the philosophical bases of Soviet state security.

Wolin and Slusser have drawn together in one volume separate studies on Soviet state security, earlier prepared by defectors from its ranks and by its victims for the now-defunct Research Program on the USSR. Their historical survey of Soviet security organizations from the Cheka to the KGB introduces and gives unity to these essays, which deal primarily with the internal repressive and counterintelligence roles of state security. External espionage activity receives only superficial and generalized treatment.

Events in the Soviet orbit during late 1956 and the discovery of new documentary material after the book went to press

presented serious problems of organization to the editors. They solved these difficulties, not entirely to the reader's satisfaction, by hurriedly tacking on a "postscript" and "addenda" in the form of notes. Constant reference must be made to this added material if the text is to be brought into any order.

The success of any collective work is dependent, in the main, upon two things: the competence of the individual authors and the skill of the editor in distilling unity of purpose from divergent minds. For several reasons, Wolin and Slusser were unable to achieve this editorial standard. Philip Moseley, a former director of the Research Program, earlier commented on the serious editorial problem that plagued the Program because former Soviet scholars often could not meet the criteria of American research. Many times the work of such men had to be torn apart and completely recast. Evidence at hand indicates that some 16 research papers were used, wholly or in part, in preparing the 9 published essays. It is unlikely that all these papers were originally written under the American editors' supervision. Their editorial work, which was probably done late in the life of the Research Program when financial resources were low or nonexistent, is not of the highest standard.

Wolin and Slusser themselves have written the most valuable essay. Their historical survey of Soviet state security is the finest short summary of this subject published in English. Its value is enhanced by extensive footnotes which are detailed comments rather than mere source references. Here we can see the genesis of policies that came to full and bloody flower in the thirties: strict party control of state security, the growth of state security's right to arrest party members for opposition to dicta of the leaders, and the beginnings of Soviet espionage work abroad. (In his essay, Konstantin Shtepa¹ also discusses certain early state security policies from a different point of

¹ Konstantin Shtepa was educated in history and philology at Russian universities before the revolution. He fought with the White armies, then made his peace with the Communists, and continued his academic career at the University of Kiev until his arrest in 1938. Shtepa cast his lot with the German invaders and was later evacuated by them. His scholarly work in emigration has been disturbed by political conflicts with Ukrainian refugees in the west. He presently resides in the US. Using the pen name W. Godin, he collaborated with F. Beck on the volume, *Russian Purge and the Extraction of Confession* (New York, 1951).

view.) Wolin and Slusser touch on, although they do not discuss, Stalin's own early experience in the Cheka. In the light of later developments, Stalin's personal participation in Cheka work is significant. This introductory historical essay is easily the best of the book. It is required reading for all students of Soviet state security.

Konstantin Shtepa has written on Feliks Edmundovich Dzerzhinskiy, first chief of the Cheka, and on Chekism, the doctrine of organized terror. Possibly because most source materials are in Russian, the West has done little work on the personality and career of Dzerzhinskiy. Like Stalin and Mikoyan, Dzerzhinskiy once intended to enter the priesthood. Instead, he became an idealist of revolution, the "saint of Bolshevism," whose influence on the state security apparatus is still visible today.

Dzerzhinskiy was the greatest director of Soviet state security and the only true innovator among this motley crew. His successors have been dilettantes (Menzhinskiy), mere executive officers (Yagoda and Yezhov), ambitious politicians (Beriya), or bureaucrats of terror (Ignat'yev and Serov). Under Dzerzhinskiy the Cheka developed characteristics that came to full growth in successor organizations. Even before the Cheka was created, and immediately upon the success of the October uprising, Dzerzhinskiy became commandant of Smolny, the headquarters of the new regime in Petrograd. He thus personally assumed responsibility for the lives of the leaders, a function that later passed to the Cheka and its successors. Early in the new regime, state security became interested in internal party developments. It was Dzerzhinskiy who first proposed that party members must notify state security of opposition groups or tendencies within the party. When the collective heirs of Stalin strove to loosen state security's grip on the party they were simply trying to reverse an early Dzerzhinskiy policy. Time will show just how successful they were.

The doctrine known as Chekism was first formulated in Dzerzhinskiy's time. It is a witches' brew of prerevolutionary Bolshevik theory, operational doctrine, and technique (inherited in part from the tsarist *Okhrana*), the traditional Russian view of secret police functions within the state, a cynical belief that the human being is the Soviet state's cheapest natural resource, and the Chekists' own knowledge that they form a

special privileged caste. Chekism is the doctrine of an elite created to defend a secular religion. We court disaster if we fail to understand it.

With one exception the other essays are lower in quality than the first two. All reflect the basic weakness of any volume on contemporary Soviet state security — the lack of access to timely information. Early in his essay on the organization and function of state security, Ye. A. Andreyevich⁴ makes it clear that the exact structure at the time he wrote was not known to him. He attempts, in compensation, to describe the hybrid created by Beriia in 1953 when he merged MGB and MVD. Much of Andreyevich's information was already out of date when he used it.

Little would be accomplished by a close review of Andreyevich's errors. The nomenclature and numerical designations he assigns to MVD components in 1953 cannot be trusted. He deprives the Foreign Intelligence Directorate of any responsibility for Satellite security/intelligence services. (Andreyevich does not discuss the adviser system in the Satellites.) His description of legal and illegal intelligence networks abroad is confusing and, in fact, inaccurate. Andreyevich's essay, however, does show the impact of the security machine on the average Soviet citizen.

Two essays on Soviet state security organizations since World War II (actually a discussion of state security after the creation of KGB), written by V. P. Artem'yev⁵ and G. S. Burlutskiy,⁶ must be used with discretion. The first, which is devoted to postwar organizational structure, contains numerous errors and distortions of fact.

It is regrettable that a disproportionate amount of space is given to the border guards and other armed forces of state

⁴ Ye. A. Andreyevich is one of many aliases and pen names used by Yevgeniy A. Karpovich, an electrical engineer of Soviet origin. Following exile to Siberia, he was released for military service and ultimately was sent to Germany to assist in dismantling industrial plants. He defected to the British in early 1946.

⁵ Col. Vyacheslav P. Artem'yev, alias Vasilii Chomenko, formerly of the NKVD, was at one time employed as lecturer at the US Army school in Regensburg. He is the author of *Corrective Labor Camps* (in Russian), (Munich, 1956).

⁶ Lt. Col. G. S. Burlutskiy served with Soviet frontier troops until his defection.

security. Artem'yev and Burlutskiy describe the protection of Soviet frontiers in almost painful detail. Much of their information bears the stamp of truth, although I am not certain that either man is equipped to discuss the higher echelons of this directorate. Only incidental attention is paid to state security espionage activities abroad. Artem'yev and Burlutskiy, whose competence to handle this subject I question, have written a short and inadequate essay on espionage in Western Europe. It contains errors of fact, interpretations, and emphasis. The authors, for example, deny the elementary fact that Moscow closely supervises all foreign residencies and networks. Their failure to consider in any detail the espionage role of Military Intelligence (RU) robs their paper of depth.

The best essay by a former Soviet citizen is A. Grigor'yev's⁷ paper on investigative methods. Grigor'yev himself has felt the knout of state security. Although frankly based on experience in the thirties, this essay has much value for the present-day student. Grigor'yev injects the flavor of Soviet life into his description of the recruitment and handling of secret informants; the preparation of cases against suspects; and the procedures of arrest, interrogation, and extraction of confession.

Perhaps because of the nature of their material, all essays by former Soviet citizens, except Shtepa's paper on Dzerzhinskiy, are sparsely footnoted.

Students of Soviet security/espionage organs will welcome the editors' reading list. Although it is poorly organized, this list is perhaps the best available compilation of source and secondary materials in Russian and the principal Western languages on Soviet state security. It is an indispensable tool for the specialist.

The Soviet Secret Police, is, then, a book of uneven quality. Its essays range from the indispensable to the superficial. It is poorly organized. It contains some errors of fact and interpretation. Yet it is a book that you, the professional intelligence man, should read.

Here you can find at times something of that broad view I mentioned earlier. So put aside for awhile your problems

⁷ It has not been possible to identify A. Grigor'yev.

and decisions, shove back the papers on your desk, and take a close look at the face of the enemy.

Yes, this is a book that you should read. Read it selectively, and with care to be sure — but read it.

JOHN RONDEAU

WE SPIED . . .

Among the books recently published which are of interest to persons in the field of intelligence there are two extreme leftwing publications. One is by Herbert Aptheker, a writer with a long leftwing record and a member of the Communist party. It is entitled *The Truth About Hungary*. This book goes into the causes of the Hungarian revolt as Aptheker sees them. In a chapter called "Counter Revolution and Cold War," Aptheker holds up for scrutiny what he calls "one aspect of American imperialism's program. . . ." This aspect he defines as an elaborate and sustained campaign of subversion and destruction against the lands of Socialism. The villain of his piece is CIA, and he spends forty pages dissecting the Agency. He quotes from many of the published materials on CIA, turning the meanings to meet his ends. For those who wish to read the Communist line on CIA, this chapter is informative. Also it shows the extent of the Communist effort which goes into the detailed record that apparently is kept of all overt references to CIA.

Another book replete with leftwing dialectic is *The Petrov Conspiracy Unmasked*, compiled and edited by W. J. Brown and published in Australia. A very crude attempt to discredit the Royal Commission's investigation of the Petrov case has been made in this book. All of the stock phrases and techniques of dialectic are to be found. The most absurd of these are in the *non sequituri* in criticizing the procedures of the Commission. The author cites from the transcript and then cites all sorts of literature which, he alleges, refutes the arguments or proves that the members of the Commission were incompetent. The book can well be used as an example for students of Communist dialectics. The principal theme of the book is that the Petrovs were incompetents, about to be fired from the Soviet service. Petrov was alleged to be a man of immoral character and his wife was described as being so incompetent as a clerk that, in spite of constant supervision, she thoroughly botched anything she attempted to do. According to the author, Mrs. Petrov was about to leave her husband when the whole case broke into the open. The collaboration of the

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CIA and the Department of State (even the Secretary personally) with the Australian Security Intelligence Organization is also alleged.

A book which appears to be of interest is *German Rule in Russia 1941-1945*, by Alexander Dallin. This is a study of German occupation policies in Russia and it includes material on propaganda, the Abwehr, prisoners of war, and political warfare. There is a chapter on the Vlasov movement.

Roxanne Pitt is noted as being one of the principal British agents of World War II. She relates her ventures in *The Courage of Fear*, which Sir Robert Bruce Lockhart describes as bearing the stamp of truth on every page. The author worked with the Resistance, assuming various disguises and engaging in deceptions to assist British prisoners-of-war in escaping from Italy and France. Mingling with the enemy, she extracted vital information regarding the disposition of the German and Italian armies.

Resistance under the control of intelligence organizations has been discussed in many books. Annedor Leber, however, undertakes a different presentation of resistance. She collected sixty-four stories of resistance in Germany, selecting those individuals who undertook resistance activities as a matter of conscience. Hence the appropriate title, *Conscience in Revolt*. Although brevity limits its value and interest, the motives and manner of resistance of these German martyrs lends an unusual aspect to this treatment of resistance.

In sharp contrast to the customarily serious treatment accorded intelligence activities and recollections of an author's wartime exploits, Roger Hall writes with tongue-in-cheek to record his experiences in the OSS. His selection of the title, *You're Stepping on My Cloak and Dagger*, is indicative of the humorous style in which he reminisces about recruitment, training, and operational missions in Europe.

Charles Gibbs-Smith resorts to fiction and makes the most of his freedom from the limitations imposed by recording personal experiences. He has written an exciting and timely book about a rocket and guided missile scientist who fled the Russians, setting the stage for a daring escape from Vienna under the direction of intelligence operators. This takes place while the Russians stage an intensive hunt for their quarry, all of which results in an intriguing, suspenseful story. *Escape and Be*

Secret is written not only in a highly literate style but also it includes unusually interesting details of security measures used by intelligence forces to protect the scientist from attempts on his life.

For a real thriller by a good author, one can recommend *The Sledge Patrol*, by David Howarth. Howarth has written two excellent books regarding special operations in Norway during World War II. The present work has recently been serialized in *The Saturday Evening Post*. *Sledge Patrol* describes a very small segment of World War II, in which only a handful of people were involved. It was the fight to maintain the weather stations in Greenland, so that meteorological intelligence would be available for the Allied flights and sailings across the Atlantic. The Germans had to stop this service and to establish one of their own. The inevitable clash occurred in Greenland, between the Danes and Eskimos on one side and the German expedition to Greenland on the other. The reluctance of the Eskimos to fight and their lack of understanding of war and killing is an interesting factor. In the course of this operation, codes are compromised and the German leader defects. This excellent work should keep the reader up late at night, for it is a hard book to put down.

In the last issue, we mentioned Gordon Young's *Cat With Two Faces*. Another work on the same double agent has now been published, entitled *The Cat*, by Count Michael Soltikow. Here is the story of a French woman who was doubled by the Germans and used to track down members of the French Resistance.

Amiable Assassins is a tale of the Kachin guerrillas in Northern Burma during World War II, by one of their British officers, Ian Fellowes-Gordon.

The Rev. James Benson has written *Prisoner's Base and Home Again*, an account of his capture in New Guinea in 1942. He was a missionary, and his tale of Japanese prison camps and suffering has been well received in England. Another recently published tale of escape with the help of Chinese guerrillas is told in *The Long Trek*, by John Friend.

Many books have been written about British Special Operations, Executive (SOE) and its activities behind the lines in World War II. Fewer books have appeared, however, on cer-

tain corollary type activities. One such is *These Men Are Dangerous: The Special Air Service At War*, by D. I. Harrison. The SAS also operated behind enemy lines, but tended to operate more independently than those groups which linked up with the Resistance in the occupied countries. Lt. Harrison joined SAS in Egypt, and took part in the invasion of Sicily. He later jumped into France. The second of these formations was the Long Range Desert Group, and it is the subject of another book, *The Desert My Dwelling Place*, by David Lloyd Owen. This unit was also formed in the Middle East, and Colonel Owen describes its early activities in the desert and North Africa.

By the time this column is published, two more excellent books will have appeared. They are presently being serialized in the London press. The first is by Ian Fleming, whose other works have all made good reading. It deals with private intelligence operations against the diamond smugglers of recent vintage in South Africa. The Diamond Trust, it will be recalled, hired Sir Percy Sillitoe upon his retirement as head of MI 5, to combat the smuggling. He took one of his good operatives along with him. This book is written in good measure from the story of Sir Percy's top operative and is replete with the techniques of espionage in the popular style. The second book is by Wolfgang Leonhard, a German who was trained for action in the Comintern school and techniques. The installments which we have seen are informative reading.

WALTER L. PFORZHEIMER

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